History of The Willamette National Forest

by LAWRENCE AND MARY RAKESTRAW

USDA • Forest Service
Pacific Northwest Region

HISTORY OF THE WILLAMETTE NATIONAL FOREST

by

LAWRENCE AND MARY RAKESTRAW

1991

Published by the U.S. Department of Agriculture, Willamette National Forest, Eugene, Oregon. This history was undertaken as a volunteer project by Larry and Mary Rakestraw. Further information or ordering of this history can be obtained from the Willamette National Forest, P.O. Box 10607, Eugene, Oregon 97440

THE WILLAMETTE NATIONAL FOREST - A PERSONAL PERSPECTIVE

The Willamette National Forest is and has always been a very important unit of the Pacific Northwest Region of the Forest Service, U.S. Department of Agriculture. The prominence of the forest in the history of the Pacific Northwest Region has been well documented by Larry and Mary Rakestraw, who volunteered to research and write a history of the Willamette. It is hoped that this history will serve to inform the Forest Service personnel who manage the forest and the public of the interesting early history of the Willamette National Forest.

This book, the result of several years of intensive research and writing about the Willamette, records the establishment, area and name changes, development, and administration encompassing almost 100 years of Federal management. This history will also serve to refresh the memory of the public of the circumstances leading to the current management of the forest. It is also designed to inform the public readers, and forest employees, of the rich history behind the national forest conservation movement in the late 1800s, as well as the efforts of the Willamette managers to develop and utilize the natural resources present for the benefit of the people and communities of Oregon and the United States.

It has been my privilege to have worked on the forest in a variety of capacities over the past four decades and as Forest Supervisor in the 1980s. During all these years the forest has often been at the forefront in national forest management, with forest employees providing many new and innovative ideas.

In the past, employees of the Cascade and Santiam National Forests, the immediate predecessors to the Willamette National Forest, formed the basis for some of the first practical management of any national forest. Whether it has been recreation developments, fire control procedures, timber harvest methods (including the testing of some of the first chain saws), road construction techniques, and researching the basic relationships in the old-growth ecosystem, the Willamette has been a leader.

Since the end of World War II, the Willamette National Forest has been widely recognized as the top timber producing national forest in the United States. Most of the timber sold by the forest is processed in counties adjacent to the Forest. Many communities and individuals are dependent on these timber resources for their livelihood. Water from the major river systems, North Santiam, South Santiam, McKenzie, and Willamette Rivers, provides drinking water for rural communities and nearly 205,000 metropolitan users in the Willamette Valley. Over 25 percent of Oregon's population lives in the adjacent counties: Lane, Linn, Marion, Benton, and Polk counties. The populations of these counties have doubled since 1960, placing an increased pressure on the Willamette to provide for increasing public use. Recreation visitors to the Willamette can enjoy pristine wildernesses, several downhill and cross-country ski areas, many picnic and campgrounds, as well as numerous opportunities for hunting, fishing, and boating.

The Willamette is currently embroiled in debates over the proper use of the national forests. There are many contending sides and each group believes it has the best answer for the future management of the forest. There will never be total agreement, but there are many opportunities for people to influence decisions from the project level to the forest level planning effort.

I am proud to say that the Willamette has a rich diversity of employees that really care about the future of the forest. With around 1,000 employees, making it the largest single unit in the Forest Service, the Willamette National Forest employees range in specialization from archaeologist to warehouse worker.

The hope for the future is that the Willamette National Forest will continue to show the leadership and innovation that has made it famous. With the growing population in the Willamette Valley and the continuing need for wood products, recreation developments, wilderness experiences, and many forest resources, the forest will have to create opportunities for future visitors, as well as provide the basic necessities for those dependent on the forest for their livelihood.

52
34
91

As shown by the current controversies regarding the spotted owl, old-growth (ancient forest), and forest planning, there is much that needs to be done to address the concerns of citizens surrounding and using the forest. Decisions about the future management of the national forests nation-wide may well be resolved on the Willamette. This will put a tremendous responsibility on the future managers of the forest, but if the past is any predictor of the future, then the Willamette National Forest will show the way. I expect that the Willamette will be an even better place for people to work with even greater stewardship of the land and resources. I also believe that people who live near or use the resources of the Willamette will share the common ground of *their* national forest.

MICHAEL KERRICK
Forest Supervisor
Willamette National Forest

DESCRIPTION OF THE WILLAMETTE NATIONAL FOREST

The Willamette National Forest is an administrative unit of the Pacific Northwest Region of the Forest Service, U.S. Department of Agriculture. The Forest headquarters is the Supervisor's Office located in Eugene, Oregon. There are seven Ranger Districts, with offices in Oakridge, Westfir, Lowell, Blue River, McKenzie Bridge, Sweet Home, and Detroit.

The Willamette National Forest stretches for 110 miles along the western slope of the Cascade Range. There are over 1.7 million acres within the Forest boundary--1,675,408 of national forest land and 123,330 acres of land in private ownership or managed by other public agencies. It lies primarily in Lane, Linn, and Marion Counties, but also extends south into Douglas County, east into Jefferson County, and north into Clackamas County. The Willamette National Forest is located within Oregon's Second, Fourth, and Fifth United States Congressional Districts. Principal highways providing access to the Forest are State Highways 22, 58, and 126, and U.S. Highway 20, all east-west routes.

The western edge of the forest borders the Willamette Valley east of Salem, Albany, Eugene-Springfield, and Cottage Grove. The crest of the Cascade Range defines the eastern boundary of the forest from Mt. Jefferson southward past the Warm Springs Indian Reservation and along the Deschutes National Forest boundary to the Windigo Pass area north of Diamond Lake. The northern edge of the forest borders the Mt. Hood National Forest along the Santiam-Clackamas Rivers Divide, while the southern end borders the Umpqua National Forest and extends along the Willamette and Calapooya Divides east of Cottage Grove and northeast of Roseburg.

The forest has many steep, deeply dissected valleys in its' western portions. Two-thirds of the Willamette National Forest lies within the Western Cascades geologic province and contains some of the most productive forest land in the United States. Broad plateaus, broken by a line of inactive volcanoes along the crest of the High Cascades, which comprise one-third of the forest. Alpine glaciation has left this terrain marked with U-shaped valleys, moraines, and glacial lakes. Elevations range from 900 feet along the Santiam River to over 10,000 feet at the summits of Mt. Jefferson and the Three Sisters. Most of the forest lies within an elevation range of 2,000 to 4,000 feet.

Over 380,000 acres of land within the forest have been set aside by Congress to preserve wilderness character and to conserve portions of the forest's natural scenery, flora, and fauna. Other dedicated areas include the H.J. Andrews Experimental Forest, the Oregon Cascades Recreation Area, the Lamb Butte Scenic Special Interest Area, and four research natural areas.

A variety of natural resource related products and services is produced on the forest. Wood, water, wildlife, and recreation are the primary categories of these. The amenity and commodity resources of the Willamette National Forest are important nationally, as well as to the people of Oregon.

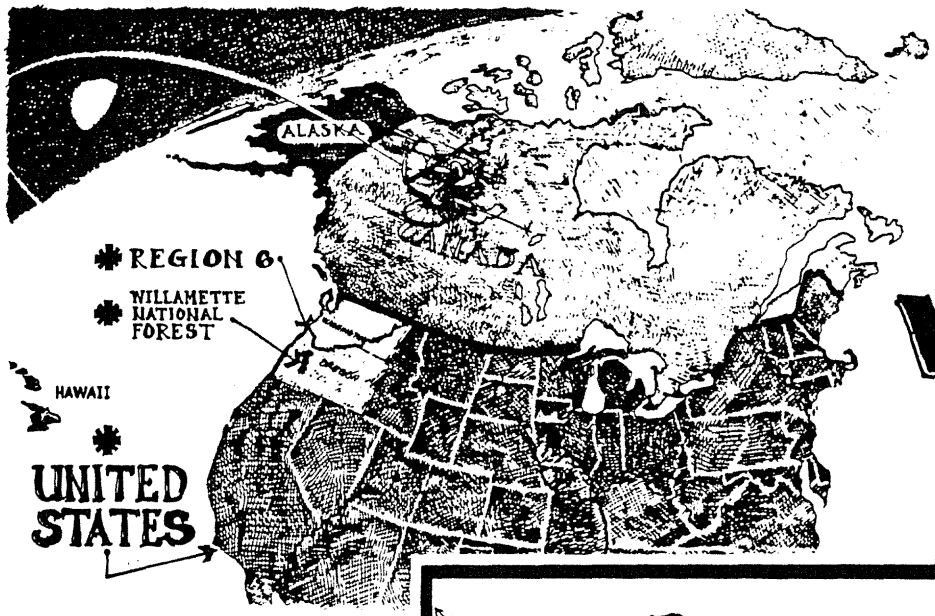
Mild climate and abundant rainfall are extremely favorable to growing magnificent evergreen trees including Douglas-fir, western hemlock, and western red cedar. This forest is the top timber producer of the 156 national forests in the United States. The Willamette National Forest produces about eight percent of all timber cut on national forest lands and provides an average of 750 million board feet of timber to the nation's economy annually. The lumber and wood products industry is the state's number one manufacturing industry, with agriculture and tourism also playing a significant part in the economy of the State. Most of the timber sold by the forest is processed in counties adjacent to the forest.

Diverse forest environments provide habitat for a wide spectrum of wildlife. Nearly 300 vertebrate wildlife species inhabit the forest, including both game and nongame species. The forest has approximately 400 lakes and more than 2,700 miles of perennial streams and rivers. An anadromous fishery, including salmon and steelhead, is found in the forest's main tributaries.

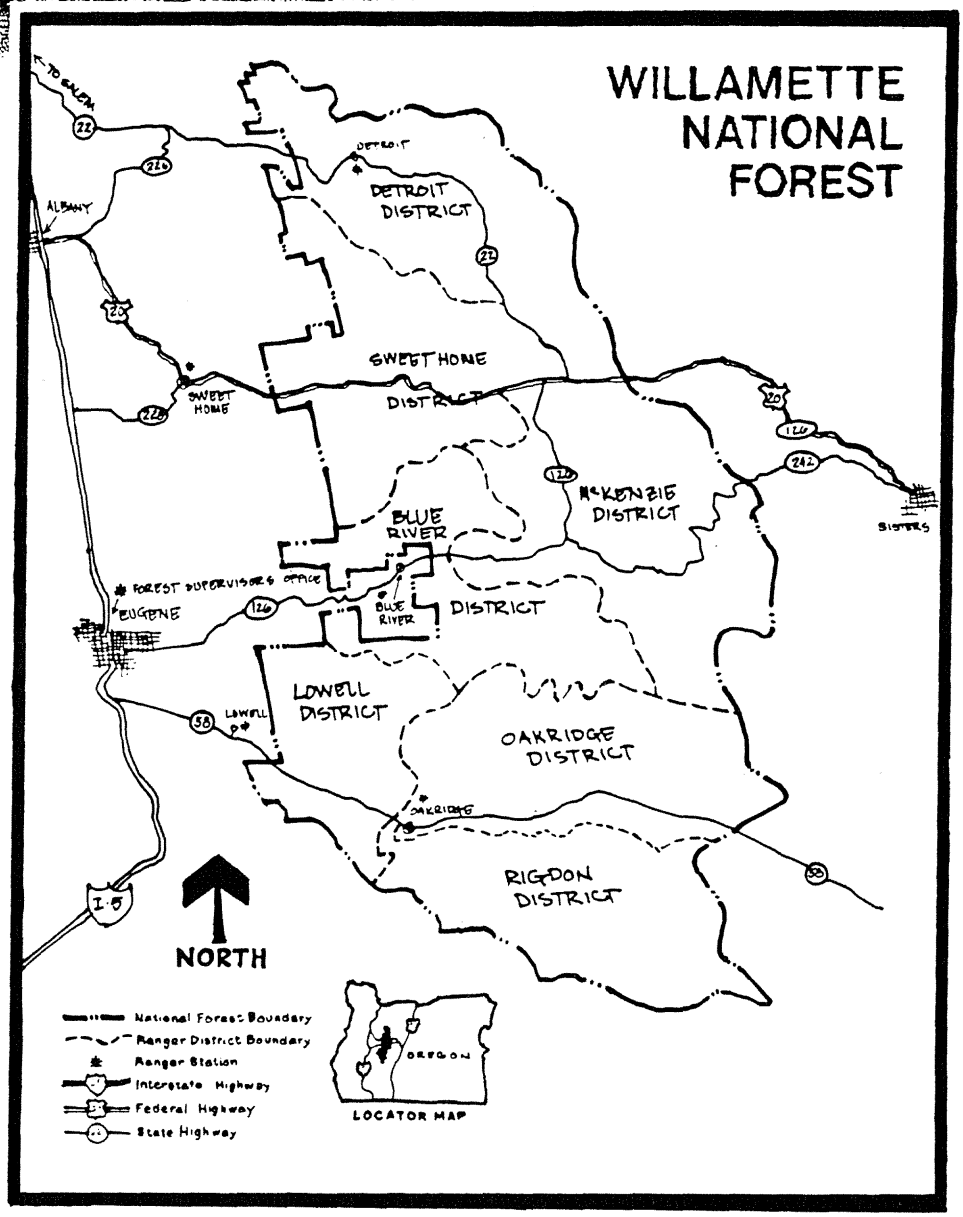
Surface water feeds seven major reservoirs that provide flood control, power generation, streamflow regulation, and recreation. Water for domestic use for rural communities and nearly 205,000 metropolitan users in the Willamette Valley also comes from the forest's system. The main stream systems of the forest are the Willamette, McKenzie, and Santiam Rivers and their tributaries.

The Willamette National Forest boasts having two river segments on the National Wild and Scenic Rivers System: 12.7 miles of the upper McKenzie River from Clear Lake down to Scott Creek and 42.5 miles of the North Fork of the Willamette River from Waldo Lake down to the Forest boundary. In addition, two other river segments are under study: Above and below Cougar Dam/Reservoir on the South Fork of the McKenzie River and Blue River above the Blue River Reservoir. In the fall of 1988, four river segments were added to the Oregon State Scenic Waterways system: The upper McKenzie River, the South Fork of the McKenzie River above Cougar Dam, the North Fork of the Willamette River downstream from Waldo Lake, and the Little North Santiam River.

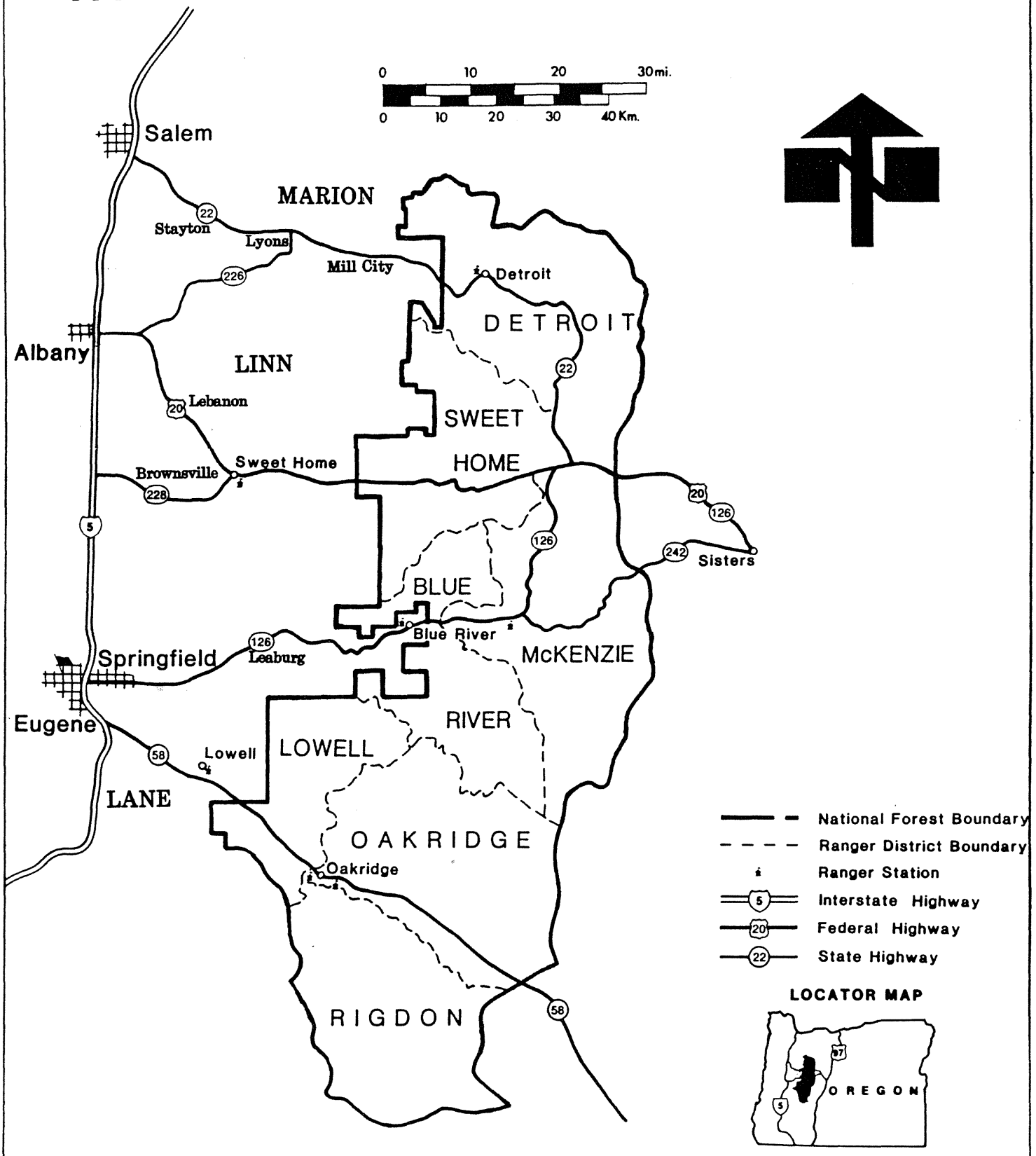
During all seasons of the year and at all elevations, the forest environment provides for a variety of recreational experiences, including camping, boating, hunting, fishing, mountain climbing, downhill and cross country skiing. Over 25 percent of Oregon's population lives in urbanized communities located in Lane, Linn, Marion, Benton, and Polk counties, and a majority of this forest's recreation users comes from these areas.



VICINITY MAP



WILLAMETTE NATIONAL FOREST



HISTORY OF THE WILLAMETTE NATIONAL FOREST

INTRODUCTION

There are four approaches to examining the history of the national forests in the United States. One may analyze their history as part of the development of world forestry. Forestry practices, developed in European countries, principally Germany and France, spread to other European countries and to the United States. Modified there to fit New World conditions, forestry from the United States spread to Canada, the Philippines, China, and Latin America. Bernhard Eduard Fernow used this approach in *A Brief History of Forestry in Europe, the United States and Other Countries* (1907, 1911), as did Robert K. Winter in *The Forest and Man* (1974). A second approach is to study the history of the national forests from the standpoint of the Washington Office of the Forest Service. This approach was used by a number of authors, including John Ise, *The United States Forest Policy* (1920); Jenks Cameron, *The Development of Governmental Forest Control in the United States* (1928); and Harold K. Steen, *The United States Forest Service: A History* (1976).

The national forests, however, are part of larger administrative Regions, and each Region has its own history. The Region is the place where policies, developed in the Washington Office, are put into effect for a given area, and where regional foresters have some leeway in adapting national policies to the Region's needs and characteristics. Regions also serve as social and scientific laboratories, helping to develop policies later adopted by the nation as a whole. Charles McKinley, *Uncle Sam in the Pacific Northwest* (1952) gives our best study of this decentralization from the standpoint of the political scientist. Relatively few studies of individual Regions have been made, although several Regional histories are under contract through the Forest Service, Washington Office, History Section. This writer's *A History of Forest Conservation in the Pacific Northwest, 1891-1913* (1979) and *A History of the U.S. Forest Service in Alaska* (1981) are to date the only systematic histories for the Pacific Northwest Region. Several regional studies, such as the four volume *Early Days in the Forest Service* (1944-76) and Edwin A. Tucker and George Fitzpatrick *Men Who Matched the Mountains: The Forest Service in the Southwest* (1972) are the raw materials of history rather than history itself.

The present approach is from the standpoint of an individual national forest--the Willamette. Use of an individual national forest as a unit for study is common, with studies ranging from articles in regional or local history journals and studies of individual ranger districts to full scale studies like Carroll E. Brown's *History of the Rogue River National Forest* (1960, 1971). As a unit for the historian to study, national forests offer some attractions and some pitfalls. Such studies examine forest history at its grassroots, where the Forest Supervisor and the District Ranger come into direct contact with the lumberman, the grazer, or the hiker in determining land use. It is the place where local history--the impact of forest regulation on the frontiersman, the rise or fall of forest communities, the day to day relationships of the forest official with stockmen, hikers, or loggers, are best studied. In the present era of frequent transfer of national forest officers, such histories are the best way for a new person to get the "feel" of a national forest and ranger district.

For the historian, the history of the individual national forests has some special problems. The historian needs to seek a balance between emphasis on local history and forest administration. If the err is on one side, the history becomes anecdotal and antiquarian; if the err is on the other, it is too far removed from the community life of the forest. The relationship of the Forest Supervisor or District Ranger to the Regional Office, the Washington Office, or the Research Station needs to be pointed out clearly. Many national forest activities are, in reality, facets of regional history. In this book, for example, much attention is given to Fred Cleator's role in preserving amenity values in the Willamette National Forest; it is actually part of work carried on in the entire Pacific Northwest Region. Policies on timber cutting practices, wilderness,

grazing, or management of hot and mineral springs were all aspects of Regional Office activities, and histories of individual national forests need to make this clear.

In this book, the point of view is that of the Supervisor's Office and the Ranger District. An important part of the history is tracing the development of the forest settlements from frontier outposts and forest communities to areas of increasing rural-urban tension. The forest's current cultural resource management (CRM) program suggests that much of the work in this evolution can best be handled by Forest Service staff, who are on the scene, know the areas, and can logically place it in its proper context with existing scholarly work in local history. References to the Regional Office have been cut to the minimum, since a history of the Pacific Northwest Region is projected and can best depict its role. It is to be hoped that this book will stir interest in a variety of specialized studies, described briefly herein, but not covered in a comprehensive manner--histories of individual mining districts, resorts, livestock companies like the Rooper interests, Civilian Conservation Corps (CCC) work, and biographies of individuals who played a part in "taming a wild forest."

We are particularly indebted to David R. Gibney, retired Supervisor of the Willamette National Forest. Our work with him continues a forty-year-old association, beginning in the Trout Lake Ranger District with "Casey" Langfield as District Ranger. Michael A. Kerrick, present Forest Supervisor of the Willamette, got the project under way, and encouraged us in our work. David and Gale Burwell played an important part in acquainting us with the forest and with its historical records. Gerald W. Williams, historian for the Umpqua and Willamette, has been of great assistance in digging up sources, evaluating the work, making editorial changes to the manuscript, revising Chapters V and VI, as well as creating most of the Appendices, Photograph Section, and Index. A host of others have helped in the work; they include Paul Hansen, former public affairs specialist in the Regional Office; Lorette Laferriere and Janet Paul, who helped on the clerical side; and Jerry Mason, former public affairs officer on the Willamette, who gave us freely of his time and knowledge.

In the history of the Willamette National Forest, as in the history of any national forest, there has been a great deal of disagreement and controversy among officials, and between officials and the public, as to the wisdom of past policies and actions and the advisability of present ones. Where experts disagree, the scholar is at liberty to form his or her own conclusions. Where we have found it necessary, we have done so. The scholar, like the turtle, gets nowhere unless he or she is willing to stick out his or her neck. Views expressed herein, therefore, do not necessarily express the views of the Forest Service or the Willamette National Forest, but are independent judgments, based on examination of available evidence. If any of the judgment prove to be wrong, they are our mistakes, rather than those of the Forest Service.

Lawrence and Mary Rakestraw
Portland, Oregon

TABLE OF CONTENTS

INTRODUCTION

- The Willamette National Forest - A Personal Perspective
- Description of the Willamette National Forest
- Vicinity Map
- Willamette National Forest Map
- History of the Willamette National Forest
- Table of Contents

CHAPTER I - BEGINNINGS 1891-1897

- Early Forest Reserve Proposal in 1889
- Forest Reserve Act of 1891
- Cascade Range Forest Reserve, 1893-1897
- Coville Report on Grazing
- Notes - Chapter I
- Chronological Summary, 1891-1897

CHAPTER II - EVOLUTION TO PROFESSIONAL LANDMANAGEMENT, 1898-1905

- U.S. Geological Survey Report on the Cascade Range Forest Reserve
- Forest Reserve Administration by the General Land Office
- General Land Office Forest Rangers
- Notes - Chapter II
- Chronological Summary, 1898-1905

CHAPTER III - TAMING A WILD FOREST: 1905-1933

- Introduction
- Administration
- Lands
- The Timber and Stone Act
- Mining Claims
- Wagon Road Grants and School Lands
- Agricultural Lands, Homesteaders, and Squatters
- Lieu Lands and Land Fraud
- The Oregon Land Fraud Cases
- Grazing
- Wildlife
- Developments
- Recreation
- Amenity Values
- Research

Fire Control
Timber Sales
Notes - Chapter III
Chronological Summary, 1905-1933

CHAPTER IV: DEPRESSION AND WAR, 1933-1945

Introduction
Administration
Timber Sales
Subsistence Homesteads
Wildlife and Grazing
Recreation, Amenity Values, Developments
Relief Work—The Civilian Conservation Corps
World War II
Notes - Chapter IV
Chronological Summary, 1933-1944

CHAPTER V: ERA OF INTENSIVE FORESTRY, 1945-1970

Introduction
Mining and Grazing
Wildlife
Developments/Changes
Forest Research
Timber Harvest—Cutting Practices
Fire Control
Recreation—Background
Changing Patterns in Recreation—McCredie Springs
Marion Lake and Waldo Lake
The Olallie Ridge/French Pete Controversy
Recreation
Notes - Chapter V
Chronological Summary, 1945-1970

CHAPTER VI: ERA OF CONFLICT AND CONFRONTATION, 1970-1988

Introduction
Societal Changes
Administration
Organizations
Research
Recreation
Timber Management
Epilogue: The Tasks Ahead
Bibliographic Note
Unpublished Sources

Notes - Chapter VI
Chronological Summary, 1970-1988

APPENDICES

Chronological Establishment of the Willamette National Forest 1891-1990

Proclamations and Executive Order 1893-1933:
1893 Proclamation - Cascade Range Forest Reserve
1901 Proclamation (2nd) - Cascade Range Forest Reserve
1907 Proclamation (3rd) - Cascade Range Forest Reserve
1907 Proclamation (4th) - Cascade Forest Reserve
1911 Proclamation (5th) - Cascade National Forest
1911 Proclamation - Santiam National Forest
1933 Executive Order - Willamette National Forest

Supervisors and District Rangers, 1893-1990

Map - RNAs, Experimental Forest, and Wildernesses
Map - Hot Springs and Reservoirs
Map - Mining Districts, Grazing Areas, and Railroads

Fire Statistics, 1945-1989
Major Forest Fires Since 1893 (Greater than 40 acres)

Reforestation Statistics, 1913-1989

Commercial Timber Sales, 1909-1989

Job Titles, Grades, Women, and Location of Employees

PHOTOGRAPH SECTION

INDEX *(omitted from the online edition)*

Published by the U.S. Department of Agriculture, Willamette NationalForest, Eugene, Oregon. This history was undertaken as a volunteerproject by Larry and Mary Rakestraw. Further information or orderingof this history can be obtained from the Willamette National Forest,P.O. Box 10607, Eugene, Oregon 97440.

INTRODUCTION

THE WILLAMETTE NATIONAL FOREST - A PERSONAL PERSPECTIVE

The Willamette National Forest is and has always been a very important unit of the Pacific Northwest Region of the Forest Service, U.S. Department of Agriculture. The prominence of the forest in the history of the Pacific Northwest Region has been well documented by Larry and Mary Rakestraw, who volunteered to research and write a history of the Willamette. It is hoped that this history will serve to inform the Forest Service personnel who manage the forest and the public of the interesting early history of the Willamette National Forest.

This book, the result of several years of intensive research and writing about the Willamette, records the establishment, area and name changes, development, and administration encompassing almost 100 years of Federal management. This history will also serve to refresh the memory of the public of the circumstances leading to the current management of the forest. It is also designed to inform the public readers, and forest employees, of the rich history behind the national forest conservation movement in the late 1800s, as well as the efforts of the Willamette managers to develop and utilize the natural resources present for the benefit of the people and communities of Oregon and the United States.

It has been my privilege to have worked on the forest in a variety of capacities over the past four decades and as Forest Supervisor in the 1980s. During all these years the forest has often been at the forefront in national forest management, with forest employees providing many new and innovative ideas.

In the past, employees of the Cascade and Santiam National Forests, the immediate predecessors to the Willamette National Forest, formed the basis for some of the first practical management of any national forest. Whether it has been recreation developments, fire control procedures, timber harvest methods (including the testing of some of the first chain saws), road construction techniques, and researching the basic relationships in the old-growth ecosystem, the Willamette has been a leader.

Since the end of World War II, the Willamette National Forest has been widely recognized as the top timber producing national forest in the United States. Most of the timber sold by the forest is processed in counties adjacent to the Forest. Many communities and individuals are dependent on these timber resources for their livelihood. Water from the major river systems, North Santiam, South Santiam, McKenzie, and Willamette Rivers, provides drinking water for rural communities and nearly 205,000 metropolitan users in the Willamette Valley. Over 25 percent of Oregon's population lives in the adjacent counties: Lane, Linn, Marion, Benton, and Polk counties. The populations of these counties have doubled since 1960, placing an increased pressure on the Willamette to provide for increasing public use. Recreation visitors to the Willamette can enjoy pristine wildernesses, several downhill and cross-country ski areas, many picnic and campgrounds, as well as numerous opportunities for hunting, fishing, and boating.

The Willamette is currently embroiled in debates over the proper use of the national forests. There are many contending sides and each group believes it has the best answer for the future management of the forest. There will never be total agreement, but there are many opportunities for people to influence decisions from the project level to the forest level planning effort.

I am proud to say that the Willamette has a rich diversity of employees that really care about the future of the forest. With around 1,000 employees, making it the largest single unit in the Forest Service, the Willamette National Forest employees range in specialization from archaeologist to warehouse worker.

The hope for the future is that the Willamette National Forest will continue to show the leadership and innovation that has made it famous. With the growing population in the Willamette Valley and the continuing need for wood products, recreation developments, wilderness experiences, and many forest resources, the forest will have to create opportunities for future visitors, as well as provide the basic necessities for those dependent on the forest for their livelihood.

As shown by the current controversies regarding the spotted owl, old-growth (ancient forest), and forest planning, there is much that needs to be done to address the concerns of citizens surrounding and using the forest. Decisions about the future management of the national forests nation-wide may well be resolved on the Willamette. This will put a tremendous responsibility on the future managers of the forest, but if the past is any predictor of the future, then the Willamette National Forest will show the way. I expect that the Willamette will be an even better place for people to work with even greater stewardship of the land and resources. I also believe that people who live near or use the resources of the Willamette will share the common ground of *their* national forest.

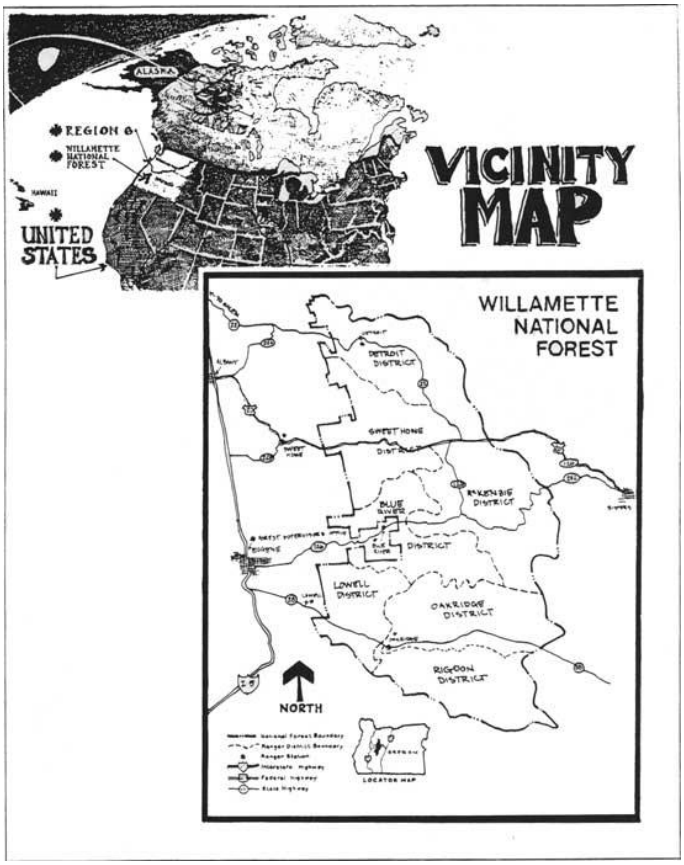
MICHAEL KERRICK
Forest Supervisor
Willamette National Forest

INTRODUCTION

DESCRIPTION OF THE WILLAMETTE NATIONAL FOREST

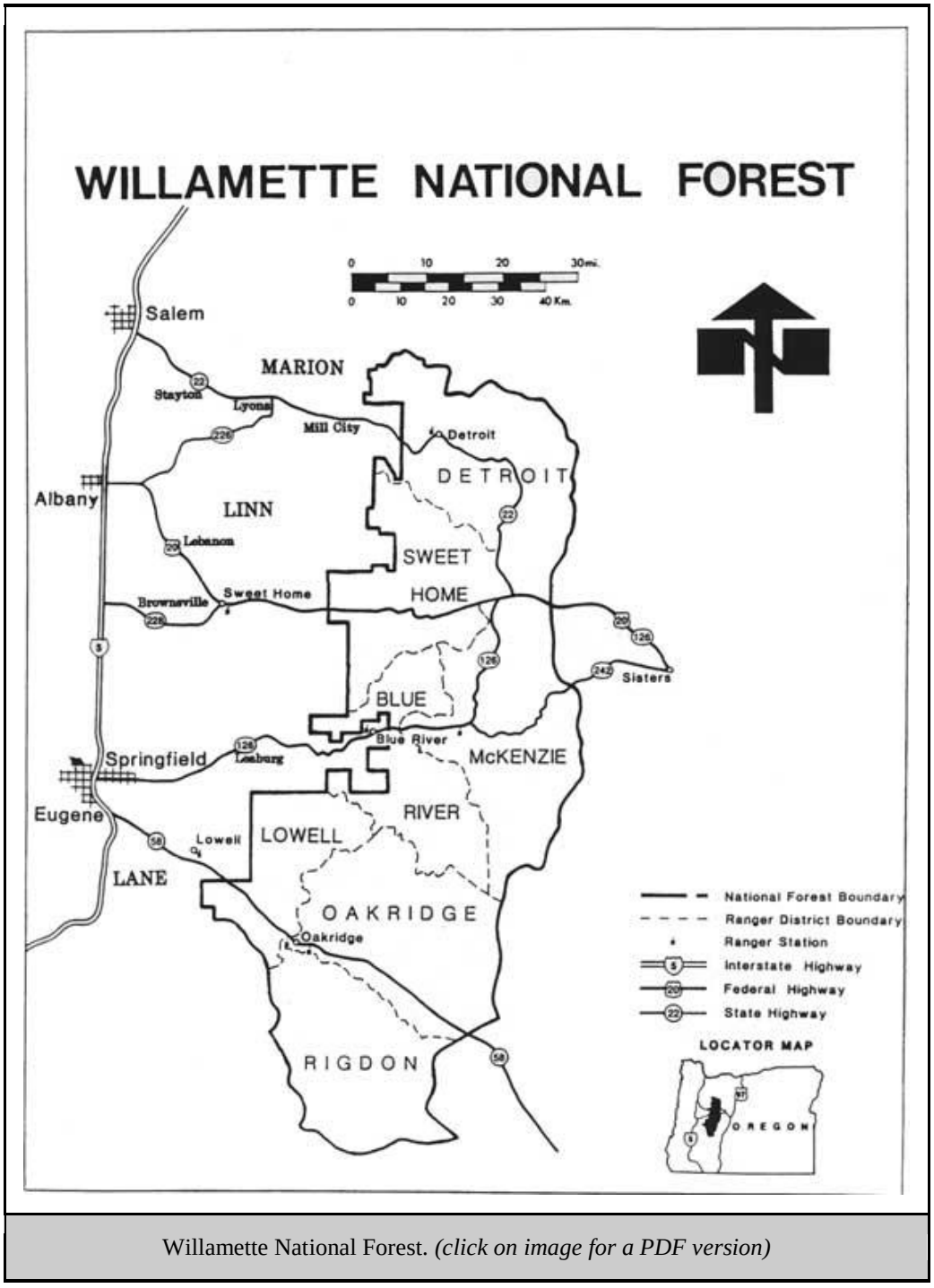
The Willamette National Forest is an administrative unit of the Pacific Northwest Region of the Forest Service, U.S. Department of Agriculture. The Forest headquarters is the Supervisor's Office located in Eugene, Oregon. There are seven Ranger Districts, with offices in Oakridge, Westfir, Lowell, Blue River, McKenzie Bridge, Sweet Home, and Detroit.

The Willamette National Forest stretches for 110 miles along the western slope of the Cascade Range. There are over 1.7 million acres within the Forest boundary—1,675,408 of national forest land and 123,330 acres of land in private ownership or managed by other public agencies. It lies primarily in Lane, Linn, and Marion Counties, but also extends south into Douglas County, east into Jefferson County, and north into Clackamas County. The Willamette National Forest is located within Oregon's Second, Fourth, and Fifth United States Congressional Districts. Principal highways providing access to the Forest are State Highways 22, 58, and 126, and U.S. Highway 20, all east-west routes.



Vicinity Map. *(click on image for a PDF version)*

The western edge of the forest borders the Willamette Valley east of Salem, Albany, Eugene-Springfield, and Cottage Grove. The crest of the Cascade Range defines the eastern boundary of the forest from Mt. Jefferson southward past the Warm Springs Indian Reservation and along the Deschutes National Forest boundary to the Windigo Pass area north of Diamond Lake. The northern edge of the forest borders the Mt. Hood National Forest along the Santiam-Clackamas Rivers Divide, while the southern end borders the Umpqua National Forest and extends along the Willamette and Calapooya Divides east of Cottage Grove and northeast of Roseburg.



Willamette National Forest. *(click on image for a PDF version)*

The forest has many steep, deeply dissected valleys in its' western portions. Two-thirds of the Willamette National Forest lies within the Western Cascades geologic province and contains some of the most productive forest land in the United States. Broad plateaus, broken by a line of inactive volcanoes along the crest of the High Cascades, which comprise one-third of the forest. Alpine glaciation has left this terrain marked with U-shaped valleys, moraines, and glacial lakes. Elevations range from 900 feet along the Santiam River to over 10,000 feet at the summits of Mt. Jefferson and the Three Sisters. Most of the forest lies within an elevation range of 2,000 to 4,000 feet.

Over 380,000 acres of land within the forest have been set aside by Congress to preserve wilderness character and to conserve portions of the forest's natural scenery, flora, and fauna. Other dedicated areas include the H.J. Andrews Experimental Forest, the Oregon Cascades Recreation Area, the Lamb Butte Scenic Special Interest Area, and four research natural areas.

A variety of natural resource related products and services is produced on the forest. Wood, water, wildlife, and recreation are the primary categories of these. The amenity and commodity resources of the Willamette National Forest are important nationally, as well as to the people of Oregon.

Mild climate and abundant rainfall are extremely favorable to growing magnificent evergreen trees including Douglas-fir, western hemlock, and western red cedar. This forest is the top timber producer of the 156 national forests in the United States. The Willamette National Forest produces about eight percent of all timber cut on national forest lands and provides an average of 750 million board feet of timber to the nation's economy annually. The lumber and wood products industry is the state's number one manufacturing industry, with agriculture and tourism also playing a significant part in the economy of the State. Most of the timber sold by the forest is processed in counties adjacent to the forest.

Diverse forest environments provide habitat for a wide spectrum of wildlife. Nearly 300 vertebrate wildlife species inhabit the forest, including both game and nongame species. The forest has approximately 400 lakes and more than 2,700 miles of perennial streams and rivers. An anadromous fishery, including salmon and steelhead, is found in the forest's main tributaries. Surface water feeds seven major reservoirs that provide flood control, power generation, streamflow regulation, and recreation. Water for domestic use for rural communities and nearly 205,000 metropolitan users in the Willamette Valley also comes from the forest's system. The main stream systems of the forest are the Willamette, McKenzie, and Santiam Rivers and their tributaries.

The Willamette National Forest boasts having two river segments on the National Wild and Scenic Rivers System: 12.7 miles of the upper McKenzie River from Clear Lake down to Scott Creek and 42.5 miles of the North Fork of the Willamette River from Waldo Lake down to the Forest boundary. In addition, two other river segments are under study: Above and below Cougar Dam/Reservoir on the South Fork of the McKenzie River and Blue River above the Blue River Reservoir. In the fall of 1988, four river segments were added to the Oregon State Scenic Waterways system: The upper McKenzie River, the South Fork of the McKenzie River above

Cougar Dam, the North Fork of the Willamette River downstream from Waldo Lake, and the Little North Santiam River.

During all seasons of the year and at all elevations, the forest environment provides for a variety of recreational experiences, including camping, boating, hunting, fishing, mountain climbing, downhill and cross country skiing. Over 25 percent of Oregon's population lives in urbanized communities located in Lane, Linn, Marion, Benton, and Polk counties, and a majority of this forest's recreation users comes from these areas.

INTRODUCTION

There are four approaches to examining the history of the national forests in the United States. One may analyze their history as part of the development of world forestry. Forestry practices, developed in European countries, principally Germany and France, spread to other European countries and to the United States. Modified there to fit New World conditions, forestry from the United States spread to Canada, the Philippines, China, and Latin America. Bernhard Eduard Fernow used this approach in *A Brief History of Forestry in Europe, the United States and Other Countries* (1907, 1911), as did Robert K. Winter in *The Forest and Man* (1974). A second approach is to study the history of the national forests from the standpoint of the Washington Office of the Forest Service. This approach was used by a number of authors, including John Ise, *The United States Forest Policy* (1920); Jenks Cameron, *The Development of Governmental Forest Control in the United States* (1928); and Harold K Steen, *The United States Forest Service: A History* (1976).

The national forests, however, are part of larger administrative Regions, and each Region has its own history. The Region is the place where policies, developed in the Washington Office, are put into effect for a given area, and where regional foresters have some leeway in adapting national policies to the Region's needs and characteristics. Regions also serve as social and scientific laboratories, helping to develop policies later adopted by the nation as a whole. Charles McKinley, *Uncle Sam in the Pacific Northwest* (1952) gives our best study of this decentralization from the standpoint of the political scientist. Relatively few studies of individual Regions have been made, although several Regional histories are under contract through the Forest Service, Washington Office, History Section. This writer's *A History of Forest Conservation in the Pacific Northwest, 1891-1913* (1979) and *A History of the U.S. Forest Service in Alaska* (1981) are to date the only systematic histories for the Pacific Northwest Region. Several regional studies, such as the four volume *Early Days in the Forest Service* (1944-76) and Edwin A. Tucker and George Fitzpatrick *Men Who Matched the Mountains: The Forest Service in the Southwest* (1972) are the raw materials of history rather than history itself.

The present approach is from the standpoint of an individual national forest—the Willamette. Use of an individual national forest as a unit for study is common, with studies ranging from articles in regional or local history journals and studies of individual ranger districts to full scale studies like Carroll E. Brown's *History of the Rogue River National Forest* (1960, 1971). As a unit for the historian to study, national forests offer some attractions and some pitfalls. Such studies examine forest history at its grassroots, where the Forest Supervisor and the District Ranger come into direct contact with the lumberman, the grazer, or the hiker in determining land use. It is the place where local history—the impact of forest regulation on the frontiersman, the rise or fall of forest communities, the day to day relationships of the forest official with stockmen, hikers, or loggers, are best studied. In the present era of frequent transfer of national

forest officers, such histories are the best way for a new person to get the "feel" of a national forest and ranger district.

For the historian, the history of the individual national forests has some special problems. The historian needs to seek a balance between emphasis on local history and forest administration. If the err is on one side, the history becomes anecdotal and antiquarian; if the err is on the other, it is too far removed from the community life of the forest. The relationship of the Forest Supervisor or District Ranger to the Regional Office, the Washington Office, or the Research Station needs to be pointed out clearly. Many national forest activities are, in reality, facets of regional history. In this book, for example, much attention is given to Fred Cleator's role in preserving amenity values in the Willamette National Forest; it is actually part of work carried on in the entire Pacific Northwest Region. Policies on timber cutting practices, wilderness, grazing, or management of hot and mineral springs were all aspects of Regional Office activities, and histories of individual national forests need to make this clear.

In this book, the point of view is that of the Supervisor's Office and the Ranger District. An important part of the history is tracing the development of the forest settlements from frontier outposts and forest communities to areas of increasing rural-urban tension. The forest's current cultural resource management (CRM) program suggests that much of the work in this evolution can best be handled by Forest Service staff, who are on the scene, know the areas, and can logically place it in its proper context with existing scholarly work in local history. References to the Regional Office have been cut to the minimum, since a history of the Pacific Northwest Region is projected and can best depict its role. It is to be hoped that this book will stir interest in a variety of specialized studies, described briefly herein, but not covered in a comprehensive manner—histories of individual mining districts, resorts, livestock companies like the Rooper interests, Civilian Conservation Corps (CCC) work, and biographies of individuals who played a part in "taming a wild forest."

We are particularly indebted to David R. Gibney, retired Supervisor of the Willamette National Forest. Our work with him continues a forty-year-old association, beginning in the Trout Lake Ranger District with "Casey" Langfield as District Ranger. Michael A. Kerrick, present Forest Supervisor of the Willamette, got the project under way, and encouraged us in our work. David and Gale Burwell played an important part in acquainting us with the forest and with its historical records. Gerald W. Williams, historian for the Umpqua and Willamette, has been of great assistance in digging up sources, evaluating the work, making editorial changes to the manuscript, revising Chapters V and VI, as well as creating most of the Appendices, Photograph Section, and Index. A host of others have helped in the work; they include Paul Hansen, former public affairs specialist in the Regional Office; Lorette Laferriere and Janet Paul, who helped on the clerical side; and Jerry Mason, former public affairs officer on the Willamette, who gave us freely of his time and knowledge.

In the history of the Willamette National Forest, as in the history of any national forest, there has been a great deal of disagreement and controversy among officials, and between officials and the public, as to the wisdom of past policies and actions and the advisability of present ones. Where experts disagree, the scholar is at liberty to form his or her own conclusions. Where we have found it necessary, we have done so. The scholar, like the turtle, gets nowhere unless he or she is

willing to stick out his or her neck. Views expressed herein, therefore, do not necessarily express the views of the Forest Service or the Willamette National Forest, but are independent judgments, based on examination of available evidence. If any of the judgment prove to be wrong, they are our mistakes, rather than those of the Forest Service.

Lawrence and Mary Rakestraw
Portland, Oregon

Chapter I
BEGINNINGS, 1891-1898

The movement for forestry and Federal forests in the period 1876-1891 was a complex one. It involved a variety of agencies, ranging on the Federal level from the Division of Forestry to the U.S. Fish Commission and included state activity. At least three western states, Colorado in 1876, California in 1885, and Oregon in 1889, asked that forest reserves be created within their boundaries. Motives for creating forest reserves, now national forests, varied; they included desire to preserve natural beauty; protection of city watersheds and watersheds of value for irrigation; preservation of game habitat; and hostility to land speculators, light burners, and sheepmen. Actually in the creation of each national forest there were a variety of motives, representing a wide cross-section of people. In this history a large amount of material is summarized, since the creation of the area in the middle Cascades, which became the Willamette National Forest, was a part of a broader movement to create the Cascade Range, Ashland, and Bull Run Forest Reserves. The story has been covered in greater detail elsewhere. [1]

EARLY FOREST RESERVE PROPOSAL IN 1889

People in western Oregon during the latter years of the 19th century were closely attuned to the intellectual currents of their time. A large share of the leadership came from the cities in the Willamette Valley—Portland and Salem, the economic and political centers of the state; and to the south Eugene and Roseburg. Urban dwellers who relied on the mountains for their recreation, read scientific reports dealing with the forests and became caught up in the demand for reform of the land laws. [2]

John Breckenridge Waldo, the son of an Oregon pioneer and former Chief Justice of the Oregon Supreme Court, was a mountain lover who spent his summers in the wilds of the Cascades. Inspired by the efforts of Colorado and California to establish forest reserves by legislative action, he developed an idea for a forest reserve along the spine of the Cascade Range. In January of 1889, he introduced into the Legislative Assembly of Oregon a memorial to Congress regarding reservation of the crest of the Cascade Range and two townships (12 miles) on either side. The House Joint Memorial #8 stressed the importance of the projected reserve for its wilderness values, scenery, forests, waterflow, and game.

The projected management of the forest reserve was an interesting attempt at state-Federal cooperation. The area was to be administered by a board headed by the Governor, and consisting of six men named by the Governor, and six appointed by the President of the United States. The members would also serve as state game commissioners. They would protect the game and make leases for resorts in the reserve, and report to the state legislature each session. Grazing except for saddle stock in transit would be forbidden; mines could be worked but would be forfeited if assessment work ceased for a two-year period; railroads crossing the area could use the timber and stone needed for construction but no more. Essentially it was a state park with a great deal of Federal supervision and management. In the House the memorial was modified first by eliminating the grazing land in the extreme south of the state, and second allowing a ten-year moratorium on the prohibition of grazing to allow stockmen already using the mountain ranges

to find other grazing grounds. With these modifications, the bill passed the House. In the Senate, however, grazing interests mobilized their forces and succeeded in having the measure tabled. [3]

FOREST RESERVE ACT OF 1891

On March 3, 1891, Congress passed an act revising land laws and in the last section included a provision authorizing the President by proclamation to set aside public lands covered with timber or undergrowth, whether of commercial value or not. [4] States in the West suggested to the Federal government that certain lands should be protected because of their potential value for national parks, to protect city watersheds, to protect salmon spawning grounds, to preserve irrigation water, and to preserve amenity values. [5] In the Cascade Range of mountains in Oregon, two small reserves were established to protect the city watersheds of Ashland (the Ashland Forest Reserve) and Portland (the Bull Run). [6] The movement for a larger reserve was led by William Gladstone Steel, supported by a large and miscellaneous group of respectable and not-so-respectable citizens.

Steel had been instrumental a few years previously in having ten townships withdrawn from entry around Crater Lake, pending acceptance by Congress of a national park bill. [7] With the assistance of the Oregon Alpine Club, he began circulating plans to create a forest reservation around the Mt. Hood area. At the same time a group from Klamath County petitioned for withdrawal of further areas around Crater Lake. Both groups were in touch with the American Forestry Association, which strongly supported the reserve action.

Meantime a group of land speculators led by Stephen A. Douglas Puter saw an opportunity to profit by lieu land provisions in the bill. They took a copy of the Waldo proposal of 1885 along with a linen map showing the proposed boundaries, and suggested that Steel ask for the whole Cascade Range. Steel took the bait and rounded up petitions for reserving the entire range.

Petitions by the dozen came to the General Land Office signed by boards of trade, state officials, Federal and state judges, and members of the Oregon Alpine Club. A General Land Office official, R.G. Savery, investigated the area and found sentiment overwhelmingly for the reserve. By November 1892 a few protests were registered. They included protests from some homesteaders, and from the miners in the Bohemia Mining District near Cottage Grove. By January 1893, Steel became aware that the large reserve would aid speculators, and backed off from the larger proposal asking that the reserve be limited to the Mt. Hood and Crater Lake areas. The movement for the whole range had momentum however, and on September 28, 1893, the Cascade Range Forest Reserve reaching from the Columbia River nearly to the California border was created. [8]

THE CASCADE RANGE FOREST RESERVE, 1893-1897

In the period 1893-1897 the forest reserves were areas reserved from use rather than for use. Congress considered a variety of bills designed to open the reserve for use, but the bills failed on one account or another. Meantime, discontent grew. In Oregon this discontent was spearheaded by the stockmen, particularly the sheepmen.

The sheep industry in Oregon developed at an early time first in western Oregon and then on the range lands of eastern Oregon. Sheepmen wintered their flocks in the valleys of eastern Oregon, and after lambing season began to trail their flocks toward the mountains. They would enter the foothills in May or June, then move toward the higher elevations as the snow receded, and reach the alpine meadows by August. In September before the storms set in they would begin trailing their flocks out of the area. Usually a herder and his packer would herd a band of 1,500 to 2,500 sheep. They had established driveways and established ranges in the Cascades and the Sisters area; some sheepmen had used the same range in the Mt. Jefferson area since the 1880s. Sheepmen protested against their exclusion from the Cascade Range Forest Reserve and there were instances of trespass. However, government regulations dated April 14, 1894, forbade "driving, feeding, grazing, pasturing or herding of cattle, sheep or other livestock" within any of the reserves. In the summer of 1896 several arrests of sheep herders and owners were made; and suits were brought within the U.S. District Court against several owners to enjoin them from grazing within the reserve. [9]

There were other factions involved in the controversy. First sheepmen were often in the non-grazing areas of the West heartily disliked. Sheep herders were often the butt of jokes and pictured as individuals of low mentality and questionable morals. There is something of a paradox in this since in the Old World the shepherd was admired for his devotion to duty, and in literature from the Holy Bible to the novels of Sir Walter Scott he is idealized. But whereas in Scotland the townsman would remark "here comes the braw herd wi' his flock," the western townsman would remark, "here comes that damned herder with his stinking woolies." There is also a paradox in the tendency to idealize the cowboy, who is only a hired hand on horseback, and to denigrate the herder who with his dog has sole responsibility for the care of a large monetary investment. [10]

There was some opposition to sheep grazing in the reserve from recreational groups, who continued to use the reserve for their outings, mountaineering, hunting, and fishing. A great many members of the Mazamas, Oregon's most prestigious mountaineering club, were opposed to sheep grazing. There was also opposition from Indians and whites alike who utilized the huckleberry meadows, as the presence of sheep was considered incompatible with berry picking. [11]

The years 1896 and 1897 were momentous years of decision for the Cascade Range Forest Reserve. First the inertia of Congress in passing legislation regarding use of the lands in the reserve had brought about a wave of protest. Sheepmen in Wasco, Gilliam, Crook, and Sherman Counties petitioned the Department of the Interior to open the reserve to grazing; they also lobbied successfully in the state legislature. In June 1896, that body passed a resolution to the effect that the reserve interfered with development of the state, and that the reserve should be dismembered and cut into three smaller reserves: 900,000 acres around Crater Lake; 30,000 acres near Mt. Jefferson; and 30,000 around Mt. Hood. Except for these areas the reserves should be opened to grazing and settlement. [12] In the same year a National Forest Commission, appointed by the National Academy of Sciences to help "the inauguration of a national forest policy," made an extensive western trip. The members of the Commission were Charles S. Sargent (who served as chair), General Henry L. Abbot, Alexander Agassiz, Professor William H. Brewster, Wolcott Gibbs, Arnold Hague, and Gifford Pinchot (who served as secretary).

While they were visiting Crater Lake, Henry S. Graves was in the Cascades to see portions of the Cascade Range Forest Reserve the Commission had missed, to study the growth rate of Douglas-fir trees, and to "make himself familiar with the effect of sheep grazing on the Forest." They were accompanied through part of the trip, including Oregon by John Muir, the California naturalist and writer who detested sheep; and the Commission's report reflected his viewpoint. [13]

In June 1897 the Organic Administration Act of 1897 was passed, which authorized the Secretary of the Interior to "make such rules and regulations" as were necessary to ensure the objectives of such reservations. [14] Acting on this authority, the General Land Office issued some tentative regulations on grazing, permitting pasturing on forest reserves provided that no damage was done to forest growth. However in lack of any scientific evidence about the effect of grazing, no permits were to be given except in Washington and Oregon, where ample rainfall allowed for rapid renewal of herbage; and no pasturage would be permitted in areas of public resort, such as Mt. Hood, the Bull Run area, and Crater Lake. The regulations were issued so late in the year that they were inoperative in 1897. [15]

COVILLE REPORT ON GRAZING

However, scientific investigation was pending. Frederick V. Coville, a botanist working for the Department of Agriculture, conducted a botanical expedition across southeastern Oregon from the Snake River to the Cascade Range. On his return he delivered an address before the National Geographic Society, which was published in the *National Geographic Magazine*, December, 1896. In the speech and the article, he called attention to overgrazing on the public lands, and suggested remedies. Henry Gannett of the U.S. Geological Survey, which was then about to engage in mapping the reserves and collecting data on their resources, asked Coville if he would make an examination of the Cascade Range of Oregon and find out what could be done. This was followed by a formal request from the Department of the Interior to the Department of Agriculture and the request was granted. Thus the first crucial step was taken in formulation of grazing policy on national forest lands. [16]

Coville outfitted at Klamath Falls. His party, consisting, besides Coville, of E.I. Applegate as guide and collaborator and a camp hand with three saddle horses and five pack horses, entered the southern end of the reserve on July 23, and traversed the reserve until they emerged at The Dalles on September 6. They interviewed sheep owners, packers, cattle owners, recreationists, and public officials. Coville issued a preliminary report to the Secretary of the Interior on November 22, 1897, and a final report in February 1898.

Coville's report was a model of thoroughness and fairness. He described in detail the yearly routine in handling sheep, from the time they were brought in from their summer range in October through their wintering on the owner's ranch, lambing and shearing season, and the spring-summer trip to the mountains. He described the duties of herders and packers, and varied practices in handling sheep. He collected statistics on the number of sheep grazed on the reserve, and their ownership; the character of the grazing lands and their locations. This he divided into three districts; the Mt. Hood District, from the Columbia River to the northern boundary of the Warm Springs Indian Reservation; the Three Sisters District, from Mt. Jefferson to and including

the southern headwaters of the McKenzie River; and the Upper Deschutes District, south to Diamond Lake. Each in turn he subdivided into ranges. These included in the Willamette National Forest, Mt. Jefferson, Three Fingered Jack, Fish Lake, Mt. Washington, McKenzie River, Horse Creek, Three Sisters, Davis Lakes, and Willamette Cow Pastures. He analyzed the forage favored by sheep. Overgrazing in the Cascade Range Reserve, he thought, was limited to a few areas near Mt. Hood and a part of the Three Sisters area, though there were small local areas of overgrazing on bedding grounds near the driveways. He thought that the widely held belief that sheepmen started fires to increase range was at best unproven and at worst exaggerated, and devoted several pages in his report to the causes of fire.

In dealing with the question should sheep be permitted to graze on the Cascade Range Reserve, he analyzed the problem in detail. One problem was the fact that sheep, on their way to their summer range, devoured grass necessary for the stock at ranches along their routes. Coville felt this was a matter to be solved by local regulation, and of mutual consent in using established driveways separated by a reasonable distance from ranches. Other difficulties were that sheepmen from Wasco County and Sherman County using the Three Sisters range, drove their sheep through Crook County, devouring forage belonging to stockmen of that county. Coville suggested a toll on sheep crossing county lines.

Coville believed that a new set of regulations would solve most of the problems. These would include closed areas to protect places of public resort by vacationers and sources of reservoir supply. Such areas would include the Bull Run watershed and other blocks near Mt. Hood and the Crater Lake area. Also huckleberry patches should be preserved. Ranchers and townspeople, following the aboriginal customs of Indians, were in the habit of taking their families to the mountains and camping out for a few weeks of hunting, fishing, and gathering huckleberries. Huckleberry patches, including several near Mt. Hood, Huckleberry Mountain near Crater Lake and just south of the Santiam-Prineville Road, should be closed to sheep grazing.

For grazing, a system of permits should be granted. This would allow an owner to graze on a given territory for a certain number of days, with a given number of sheep, such as the area could support without detriment; to give him an exclusive right to graze in that area, but request him to confine himself to the area. He would also be asked to keep the area free, so far as possible, from man-caused fires. The permit should be granted for a number of years—five, with privilege of renewal, Coville regarded as satisfactory—and there should be cooperation with the sheep owners in having them help recommend allotment of range, adjudicate disputes, and make recommendations; and finally, there should be a fee for permits to cover costs of administration.

Coville gave as an example the Fish Lake Range in the Three Sisters area. This range Coville divided into five smaller ranges, known as The Parks, Bald Mountain, Iron Mountain, Browder Ridge, and Blue River. These ranges would support, without overgrazing, six bands of 2,000 head each, one band on the first four, two on the last. In 1896 there were eight bands grazing (illegally) on the Fish Lake Range. This was a larger number than the range could support, and as a result, the sheep did not come out in good condition and there was general dissatisfaction. Under the Coville system, the Fish Lake Range would be limited to 12,000; each sheep owner was to be given a subdivision of the range with exclusive right to grass there. In return, he was to see that no man caused fire occurred in the area, and if fires did occur, would notify the

Department of the Interior. If fires were set, the individuals responsible could be prosecuted under forest fire laws. [17]

Coville's regulations were put into effect. Various areas were closed to grazing, including the Bull Run watershed, and several huckleberry patches, including one near the headwaters of the McKenzie River. A flare-up of the controversy over grazing occurred in 1899, largely due to a visit by John Muir to the Northwest, but peace on the range developed and persisted. Clashes over range use developed, but these were largely confined to the eastern Oregon reserves, which are beyond the scope of this study. The early development of regulations, plus their capable enforcement on the Middle Cascades area by able men such as Cy Bingham, Smith Bartrum, and Addie Morris, brought about a highly cooperative attitude between the community and the forest administration. [18]

NOTES—CHAPTER I

1 Lawrence Rakestraw, *A History of Forest Conservation in the Pacific Northwest, 1891-1913* (New York, 1979), 1-69.

2 Rakestraw, *History of Forest Conservation,* 1-69; Lawrence Rakestraw, "Urban Influences on Forest Conservation," *Pacific Northwest Quarterly,* 46 (October, 1955), 108-111.

3 Waldo, John B., "The Cascade Forest Reservation," *The Forester,* 4 (May, 1898), 101-102; Rakestraw, *History of Forest Conservation,* 31-33.

4 There are a large number of books dealing with the passage of this Bill. Among the best are Andrew Denny Rodgers III, *Bernhard Eduard Fernow: A Story of North American Forestry* (Princeton, 1951), 155-157; Gifford Pinchot, *Breaking New Ground* (New York, 1947), 113-119; and Samuel Trask Dana, *Forest and Range Policy* (New York, 1956), 98-109.

5 Rakestraw, "Urban Influences"; Rakestraw, "Uncle Sam's Forest Reserves," *Pacific Northwest Quarterly,* 44 (October, 1953), 145-151.

6 Rakestraw, *History of Forest Conservation,* 37-42.

7 John Ise, *Our National Park Policy: A Critical History* (Baltimore, 1961), 128-130. Steel, a unique combination of outdoorsman, speculator, and public servant deserves a full length biography. A good appreciation is to be found in Jack Grauer, *Mount Hood: A Complete History* (privately printed, 1975), 109-112.

8 Rakestraw, *History of Forest Conservation,* 49-53. The story is a complex one, but this narrative is largely based on General Land Office files dealing with the creation of the Forest in the National Archives. Grauer, *Mount Hood,* 129-130, states that the Oregon Alpine Club died in 1891; however, the Club signature is on several of the petitions in the Land Office.

9 John Minto, "Sheep Husbandry in Oregon," *Oregon Historical Quarterly,* III (September, 1902), 219-239; Frederick V. Coville, *Forest Growth and Sheep Grazing in the Cascade*

Mountains of Oregon, U.S. Department of Agriculture, Division of Forestry, Bulletin No. 15 (Washington, 1898), 8-11; Lawrence Rakestraw, "Sheep Grazing in the Cascade Range: John Minto vs. John Muir," *Pacific Historical Review,* 27 (November, 1958), 371-382.

10 Archer B. Gilfillan, *Sheep* (Boston, 1928) defends sheepherding as a profession. Elliot Paul, *Fracas in the Foothills* (New York, 1940) is an entertaining Homer Evans mystery which repeats most of the "jokelore" about sheepherders' low mentality and unorthodox sexual proclivities, as does H.L. Davis in *Honey in the Horn* (New York, 1935). In his *Kettle of Fire* (New York, 1959) Davis deals with his own herding experience in Oregon.

11 Rakestraw, *History of Forest Conservation,* 115-121 gives some sampling of public opinion as expressed in letters to the *Oregonian.* See also Rakestraw "Sheep Grazing."

12 Rakestraw, *History of Forest Conservation,* 102-103.

13 National Academy of Sciences, Forestry Commission, *Forest Policy for the Forest Lands of the United States* (Washington, 1897); Gifford Pinchot, *Breaking New Ground* (New York, 1947), 101-103; for the effect of the commission report, and particularly John Minto's criticism of it, see Rakestraw, "Sheep Grazing."

14 The best summary of the provisions of the bill is to be found in Dana, *Forest and Range Policy,* 107-109.

15 Rakestraw, *History of Forest Conservation,* 110-111.

16 Frederick V. Coville to Gifford Pinchot, June 7, 1935, in Gifford Pinchot Papers, Library of Congress, Box 340. I am indebted to Gerald W. Williams for obtaining a copy of this item for me.

17 Frederick V. Coville, *Forest Growth.*

18 Rakestraw, "Sheep Grazing."

CHRONOLOGICAL SUMMARY, 1887-1897

1887

The founding of Oregon Alpine Club.

1889

John B. Waldo's House Joint Memorial #8 introduced in the Oregon House of Representatives. The Memorial failed in the Oregon State Senate.

1891

The Act of March 3 (26 Stat. 1095) repealed the Timber Culture Act of 1873 and the homestead Preemption Act of 1841; put a stop to auction sales of public lands except isolated tracts and abandoned military and other reservations; tightened up the requirements for improvement and cultivation under the Desert Land Act of 1877, and extended it to include Colorado; did not allow commutation under the Homestead Act of 1862 until fourteen months after filing; limited the time within which suit to annul patent might be brought; restricted withdrawals for reservoir sites to the area actually needed for that purpose; authorized rights-of-way for irrigation canals and drainage ditches through public lands and reservations; provided that in any criminal or civil prosecution for trespass on the public lands in any of the Rocky Mountain states or territories except Arizona and New Mexico and in the district of Alaska, it should be a defense if the timber had been cut for use in such state or territory by a resident thereof for agricultural, mining, manufacturing, or domestic purposes and had not been transported out of the same, and authorized the Secretary of the Interior to make rules and regulations for the carrying out of this provision; and empowered the President to set aside as forest reserves public lands covered with timber or undergrowth, whether of commercial value or not, The last provision (Sec. 24) was added by the conference committee and is often referred to as the Creative Act or Forest Reserve Act.

1893

Joint Resolution by Oregon State Senate to create reserves.

Oregon Fire Law passed.

1894

Mazamas founded in Portland.

Federal regulations published on April 14th which prohibited "driving, feeding, grazing, pasturing, or herding" of livestock in reserves.

1896

Several petitions by sheepmen and Oregon delegation to Congress to reduce the forest reserves.

January 10th, legal proceedings instigated against illegal sheep grazers.

At the request of Secretary of the Interior, Hoke Smith, the National Academy of Sciences appointed a special committee—the National Forest Commission to investigate the forest reserve situation and recommend a national forestry policy. Charles S. Sargent was the chair and Gifford Pinchot the secretary. Sundry Civil Appropriations Act of June 11 (29 Stat. 413, 432) appropriated $25,000 to meet the expenses.

The Act of February 24 (29 Stat. 594) provided penalties for willfully or maliciously setting on fire any timber, underbrush, or grass on the public domain; carelessly or negligently leaving fire to burn unattended near any timber or other inflammable material; or failing to totally extinguish

any campfire or other fire in or near any forest, timber, or other inflammable material before leaving it.

1897

The Sundry Civil Appropriations Act of June 4 (30 Stat. 11, 34), since referred to as the Organic Administration Act of 1897, specified the purposes for which forest reserves might be established and provided for their protection and administration. After disagreement between the two houses, their differences were ironed out by a conference committee. The bill was approved by the President and became a law on June 4, 1897. In its final form, its main provisions were as follows:

1. It appropriated $150,000 for survey by the U.S. Geological Survey of forest reserves already created or to be created.
2. It suspended Cleveland's proclamations of February 22, 1897, until March 1, 1898, when they were again to become effective.
3. It authorized the President to revoke, modify, or suspend any executive order or proclamation pertaining to forest reserves.
4. It provided that "no public forest reservation shall be established except to improve and protect the forest within the reservation for the purpose of securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States."
5. It stated that it was not intended to authorize the inclusion within forest reserves "of lands more valuable for the mineral therein, or for agricultural purposes, than for forest purposes" and specifically authorized the restoration to the unreserved public domain of lands found after due examination to be better adapted for mining or agriculture than for forest usage.
6. It instructed the Secretary of the Interior to protect the forest reserves against destruction by fire and depredations and authorized him to "make such rules and regulations and establish such service as will insure the objects of such reservations, namely, to regulate their occupancy and use and to preserve the forests thereon from destruction."
7. It made any violation of the provisions of the act or of the Secretary's rules and regulations punishable by a fine of not more than $500 and imprisonment for not more than twelve months.
8. It authorized the Secretary of the Interior to sell so much of the dead, matured, or large growth of trees as may be compatible with the utilization of the forest, after advertisement, at not less than its appraised value, for use in the state or territory where the reserve is located, but not for export therefrom.
9. It authorized the Secretary of the Interior to permit the free use of timber and stone for firewood, fencing, buildings, mining, and other domestic purposes, within the state or territory where the reserve is located.
10. It provided for free egress and ingress of actual settlers, including the construction of such wagon roads and other improvements as may be necessary to reach their homes and utilize their property, under rules and regulations prescribed by the Secretary of the Interior.

11. It authorized the prospecting, locating, and developing of the mineral resources of the reserves, and the entry of any mineral lands under the laws of the United States and the rules and regulations applying thereto.
12. It authorized the settler or owner of a tract covered by an unperfected bona fide claim, or by a patent, to relinquish it to the government and in lieu thereof to select a tract of vacant land open to settlement not exceeding in area the tract relinquished. With unperfected claims the requirements respecting settlement, residence, improvements, and so forth, must be complied with on the new claims, credit being allowed for the time spent on the relinquished claims.
13. It authorized settlers within the reserves or in the vicinity thereof to occupy not more than two acres of reserve land for each school and one-acre for a church.
14. It provided that civil and criminal jurisdiction over persons within forest reserves should remain unchanged except so far as the punishment of offenses against the United States is concerned, the intent being that states should not lose jurisdiction, nor inhabitants their rights, privileges, and duties because of the establishment of the reserve.
15. It provided that all waters on the reserves may be used for domestic, mining, milling, or irrigation purposes under the laws of the state or under the laws of the United States and rules and regulations established thereunder.

A Division of Geography and Forestry was established in the U.S. Geological Survey to handle surveying and mapping of the forest reserves and to collect data on their resources.

Frederick Coville investigation and report on damage to the Forest Reserves by sheep grazing. The Cascade Range Forest Reserve was reopened to grazing.

Chapter II

EVOLUTION TO PROFESSIONAL LAND MANAGEMENT, 1898-1905

The period from 1898-1905 in the history of the Willamette National Forest was one of changes trending toward protection of the forested land and alpine meadows, custodial management of resources, and an evolution toward professional land management and a federalized type of administration, which culminated in the Regional (District) system of administration. In some areas of the West, and the Pacific Northwest, it was a scene of stress with major problems in reconciling differing interests. This was particularly true of the range lands of Oregon, and the timbered lands in northwestern Washington. For the middle Cascades of Oregon, by contrast, it was a period of quiet transition, and minimum differences in reconciling interests of various groups. The period is one relatively neglected by historians, who in their study of the emotional geology of the conservation movement tend to stress the spectacular episodes of volcanism rather than the quiet process of sedimentation or the concealed ones of metamorphism.

U.S. GEOLOGICAL SURVEY REPORT ON THE CASCADE RANGE FOREST RESERVE

The Sundry Appropriations Act of 1897 gave several administrative agencies duties in the forest reserves. The U.S. Geological Survey had $150,000 appropriated to survey the forest reserves already created, or to be created, A division of Geography and Forestry was created within the agency to handle surveying and mapping of the reserves, and to collect data on their resources. Administration of the reserves was handled by the General Land Office. The Division of Forestry and, after 1901, Bureau of Forestry in the Department of Agriculture had no jurisdictional power, but worked with the Department of the Interior to supply technical data and make recommendations for forest policy. [1]

At this point it will be desirable to digress and examine the state of the land which was included in what later became the Willamette National Forest, the land use pattern and its people. The term "environmental impact statement" had not yet been invented, but the Survey's reports were its equivalent. Reports gave general descriptions by townships of drainage, topography, soils, vegetation, mineral locations, hot and mineral springs, wild and domesticated animal life, and land use of all types. They collected data on volume of standing timber, not only making their own estimates but also collecting information from the landlookers working for timber companies. They reported on burns and their origins, and on alienated land. The descriptions by Fred Plummer, who worked on the central part of the Cascade Range Reserve as far south as Township 18, and of Arthur Dodwell and Theodore Rixon, who worked on the area to the south, are valuable tools for the historian.

River valleys were vital factors in determining the pattern of settlement, transportation routes, and resource utilization. In the north the North Fork of the Santiam with its tributaries the Little North Fork and the Breitenbush, were routes into the interior. To the south the Santiam, the McKenzie, and the Middle Fork of the Willamette played the same role. Wagon roads, trails, and

projected railroads followed the valleys, and settlers made their homes where transportation was available; while major river valleys provided the easiest access to reach the passes to the other side of the mountains.

In the Detroit area, commercial logging had developed early. The Corvallis and Eastern Railroad, was built from Mill City to Idanha, a town two miles east of Detroit. The plan of the railroad promoters was to continue the line across the mountains by way of Hogg Pass (Santiam Pass), and several miles of right-of-way had been cleared east of Idanha The railroad however, did encourage logging in the Detroit area, where two sawmills operated from time to time, and where a shingle mill was built at Idanha. Some cutting developed also on the lower reaches of the Breitenbush River. Timber speculators used existing agricultural land laws to secure often fraudulent timber claims.

Breitenbush Hot Springs, homesteaded at an early time, was already well known as a health resort. There were two tubs hollowed out of rock and a bath house built of shakes. Access to the springs was by trail; the trail continued on to connect with a wagon road on the east side of the Cascade Range. Another well-known trail, the Minto Trail, led up the North Fork of the Santiam. There was also a network of poor roads and trails on the Little North Fork of the Santiam, where some mining speculation was going on. Mining in the Little North Santiam Mining District came in several waves—discovery in the 1850s, numerous claims in the 1860s, limited mining in the early 1880s, and large scale mining operations in the late 1890s, which extended for about 30 years. The Little North Fork Mining District produced only a reported $25,257 between 1880 and 1947. About 15 miles to the south is the Quartzville Mining District that was discovered in the 1880s. Most of the Quartzville mining activity occurred in the 1890s. Quartzville Mining District produced a reported $181,255 between 1880 and 1947.

To the south, the Willamette Valley and Cascade Mountain (Santiam) Wagon Road ran from Lebanon across the mountains to Prineville following the Santiam River and crossing the range at Santiam Pass. Near the reserve border, a side road ran to Quartzville, where there was a mining rush about the turn of the century. Further south, the McKenzie Wagon Road, which had been a toll road but after 1895 was a county road, crossed the mountains by way of McKenzie Pass. The McKenzie Valley was the most settled of the river valleys. Some ranchers and stockmen settled in the area near McKenzie Bridge, and a summer hotel was located there also. Two popular resorts, Foley Springs and Belknap Springs, both near the wagon road, were served by stages from Eugene. There were a number of other hot or mineral springs not yet developed, such as Upper Soda on the Santiam and Terwilliger near the South Fork of the McKenzie. These were frequently visited by travelers. A mining boom had developed north of the community of Blue River in the 1880s but was about played out by 1903. The Blue River Mining District reportedly produced $173,780 from 1880 to 1947.

The Oregon Central Military Wagon Road followed the Middle Fork of the Willamette to cross the mountains at Willamette Pass. Most settlements in the area were on or near the road. They included farms and ranches near the present site of Lowell, where some logging also took place, Hazel Dell (now Oakridge) which had a post office and a store, Kitson Hot Springs, and several undeveloped hot springs on Salt Creek, and Rigdon Meadows, an important camping site for people traveling over the mountains. The series of large lakes on the west side of the divide—

Waldo, Crescent, and Odell—were tourist attractions and were also viewed as reservoir sites. There were many trails in the area—Indian trails across the range, sheep trails into the high country, and trails to the Bohemia Mining District in the southwest, which was then experiencing a boom.

Few people had their homes in the area, but the roads and trails were thronged with a colorful variety of travelers. They included chittum bark collectors looking for fresh groves; Indians from the Warm Springs Reservation in search of huckleberries, fish, and employment in the western Oregon hopfields; hunters and fisherman; prospectors and landlookers for lumber companies; amateur naturalists like John Minto and John B. Waldo; professional scientists like Frederick W. Coville and Gifford Pinchot; sheepherders; horse dealers; and outlaws. [2]

All the townships in the reserve had been scorched by fire. Frederick V. Coville, during his six weeks reconnaissance of 1896, counted 40 forest fires, some large, most of them small. The U.S. Geological Survey compiled a long list of fires. Of the 27 that they could date, seven had occurred before white settlement. Indians used fire as a tool for food gathering, firing meadows to kill and roast grasshoppers, to hunt deer, and probably for signaling. White settlers burned down trees to get them out of the way when clearing land, and some sheepherders set fire to mountain meadows to encourage a new growth of grass. Both Indians and whites were in the habit of igniting alpine trees at night for the "stately and magnificent" effect. In the mountains, fire was responsible for many of the meadows now grown up to huckleberries, as well as for snags in the timbered areas. [3]

FOREST RESERVE ADMINISTRATION BY THE GENERAL LAND OFFICE

Administration of the reserves was under jurisdiction of the General Land Office (GLO) in the Department of the Interior. Traditionally, the GLO had been in charge of the survey and sale of the public domain, and enforcement of laws guarding its occupancy. It was the most politicized division of the Department of the Interior, and often had been rocked with scandals. At the time the reserves were created, the Commissioner of the GLO was Binger Hermann of Oregon. Hermann was an enigmatic figure. He had some knowledge of the land use problems of Oregon, and some of his suggestions on management made sense. On the other hand, he was given to nepotism, and had a large number of relatives on the Federal payroll as Land Office agents; and he was alleged to have the habit of granting special favors to cronies. [4]

The administration of the GLO can be divided into two phases, 1897-1901 and 1901-1905. No plan was developed for administration, but only $18,000 was appropriated for fiscal 1897-98. This provided funding for only a few field men. Appropriations for fiscal 1898-99 went up to $200,000 and were raised in subsequent years. At first, the administration was in the hands of the special agents of the General Land Office. By 1899, however, a somewhat decentralized system of administration was adopted.

The 36 existing forest reserves in the West were divided into nine districts, each having a general office with an officer with the title of Forest Superintendent in charge. Each district in turn was divided into supervisor's districts, the number depending on the area of the reserve and its topography. For each supervisor's district there was appointed a forest supervisor. Each reserve

was divided into patrol districts, with a ranger appointed for each. Rangers were appointed on a seasonal basis, serving from May 2 until October 15. Rangers reported to superintendents who in turn reported to and received orders from the Commissioner of the General Land Office.

In Oregon, three supervisor's districts were set up in 1898. The Northern Division of the Cascade Range Reserve and the Bull Run Reserve were under supervisor William Henry Harrison Dufur; the Central Division under Ralphael "Ralph" Berton Dixon (who was replaced in 1900 by his brother Enos Dixon); and the Southern Division under Nathaniel "Nat" Langell. Forty rangers were assigned for the 1899 season: 37 for the Cascade Range Reserve, two for Bull Run, and one for Ashland. The Superintendent was Capt. Salmon B. Ormsby, of Salem. Appointment to ranger or other positions was largely a matter of political patronage. [5]

As time went on changes occurred. In April 1901, Gifford Pinchot wrote at length on the forest problems to Malcolm Moody, Congressman from The Dalles area, and a strong supporter of conservation. Pinchot reported that the Geological Survey work was temporary, consisting of mapping and describing the forest, and establishing permanent boundaries on the ground. The General Land Office administered the reserves but had no trained foresters on its staff. On the other hand, the Division of Forestry, in the Department of Agriculture, worked largely to promote practical forestry among private owners, and reported on technical forestry matters at the request of the Secretary of the Interior. There was need to put the forests in charge of trained foresters, but titles to land and patents should remain in Interior. Both the Secretary of Interior and the Secretary of Agriculture agreed about this, but action was impossible In the short session of Congress. So a plan was agreed on, that technical problems related to the forest be referred to the Forester and his assistants, while the Department of the Interior furnished maps and other assistance. [6]

A series of changes occurred after 1901. In 1901 a forestry division was organized in the Interior Department, Division "R." Heading it was Filibert Roth, a trained forester who had worked under Bernhard Eduard Fernow for the Division of Forestry. Smith Riley and William Henry Boole Kent (with the initials W.H.B. he was also referred to as "Whisky High Ball" Kent), both forest school graduates, were named as chief rangers, Edward Tyson Allen as Inspector, and Henry J. Tompkins as forest expert. Various rules were made governing grazing permits, allowing permits for a five year period, and giving preference to people living in the vicinity of reserves. Local questions were to be decided on local grounds, and some provision for timber sales were made. [7]

Transfer of the Reserves from Interior to Agriculture was desired by the President, and by the Secretaries of both departments, but Congress acted with glacial slowness, and not until 1905 was the transfer made. Some changes did occur. Superintendent S.B. Ormsby resigned in 1902 probably as a result of his association in land fraud, and Binger Hermann resigned in 1903 because of allegations of mishandling land claims. Superintendent Ormsby was not replaced. Edward T. Allen and later Harold D. (Doug) Langille, as Inspectors, made recommendations which rid the Division of some of its incompetents. Meantime political influence in the department was lessened by President Roosevelt's decision to clear requests for political jobs with Malcolm Moody and Governor George E. Chamberlain of Oregon. In December 1904, just

before the transfer of jurisdiction to Agriculture, the Division "R" staff were placed in Civil Service. [8]

Changes also occurred in the inner administration of the Division. Supervisors were given greater authority and direct communication with the Washington Office. They were given authority to issue free use permits, and to make timber sales under $20. Supervisors were given year-round appointments rather than the previous per year appointments. Rangers were divided into classes, first, second, and third, with wages per month respectively of $90, $75, and $60. They were allotted in proportion of one supervisor to one first class ranger, four in class two, and twelve in class three. Head rangers could supervise all ranger districts in a forest reserve, and act as deputy supervisors. Rangers of the first two classes were kept on year-round rather than being furloughed with the end of fire season, and gained their posts by promotion and knowledge. There was also hope of getting technically trained men as head rangers. [9]

As time went on, there developed a close symbiotic relationship between the Division of Forestry (changed to Bureau of Forestry in 1901) in the Department of Agriculture and Division "R" of the Department of the Interior. This division had the technically trained foresters. Gifford Pinchot himself worked as special agent in the Department of the Interior, without pay, inspecting the reserves and making recommendations. Forest experts within the Bureau of Forestry were used to locate and map areas suitable for new reserves, to make growth studies of commercially valuable trees, and to study range problems. A number of men had dual appointments, reporting both to Division "R" and to the Bureau. As it became increasingly apparent that the transfer of jurisdiction over the reserves would soon occur, the cooperation became closer. [10]

It is hard to arrive at an overall evaluation of the forest administration in the period 1898 to 1905 when the transfer from Interior to Agriculture took place. Pinchot in his autobiography gave it low marks, H.D. Langille somewhat higher. The evaluation by E.T. Allen was probably most accurate. As most writers agree, the administration was riddled with politics, which hindered a consistent administration of the forest lands. Yet progress was made in several areas: In decentralization of administration to some degree, and giving more authority in field offices; in developing free use policies, and grazing policies; and in cultivating favorable community relations. The USDA Forest Service, when it took jurisdiction, built on some firm foundations. [11]

The three Divisions of the Cascade Range Forest Reserve were reduced to two in 1902. In the Central Division, sixty-year-old Raphael "Ralph" B. Dixon was the first supervisor, serving in 1898 and 1899. Dixon was succeeded by his brother Enos Dixon in 1900. Enos served for two years, until the Central Division was eliminated and divided between the Northern Division under Miles P. Isenberg, who served for two years, and the Southern Division under Smith C. Bartrum in 1902, who served until 1907.

GENERAL LAND OFFICE FOREST RANGERS

There were a large number of rangers who served in the area, some of whom, like Bartrum, continued in the Forest Service. These included Cyrus (Cy) James Bingham, ranger from 1903-

1907 in the area; Addison Schuyler Ireland, who was transferred in 1906 to the Blue Mountains (West) Forest Reserve in eastern Oregon and later did some outstanding work in Alaska; Henry Ireland, who also went over to the east side; and William Haneman, patrolman at McKenzie Bridge who went over to state forestry. Capt. C.V. (or C.J.) Dodd, from Springfield, was a Civil War veteran with a full beard, whose equipment consisted of a pistol with four shells, two horses and a large badge; and Samuel Royal Thurston, who was a University of Oregon graduate and disabled Spanish American War veteran. Of others, most are only names whose records have not come to light: T.P. Claypool from Sisters; F.G. Connely and Z.O. (or Z.A.) Davis from Eugene; Jas D. Fay and Newt Ferrel from Salem; A.B. Haines and Ephriam Henries from Gates; F.V. (or S.V.) Herbert from Hazel Dell; W.A. "Andy" Hixon (or Hickson) from Elliston; A.W. Jones, F.L Kent, and James Kirkwood from Hull; Arthur B. Lacey from Parker; T.C. Lewis from Salem; L.R. Livermore from Eugene; Milton D. Markhorn, Ike Muller, W.H. Nash, and George Petriquin from Roseburg; Albert S. Powers from McKenzie Bridge; C.C. Presley, Sidney Scott, W.J. Stanley, and Robert W. Vetch from Cottage Grove. [12]

Records on Ralph Dixon, who died in 1930 at age 92, are scarce, but mention of him in the diaries of Addle L. Morris show him to have been a vigorous field man. [13] Smith C. Bartrum was a major figure in early Oregon conservation. A powerful stocky man, he came west from his home in Vermont and joined the reserve force as a ranger in 1899. He was not only a capable field man but highly skilled in public relations. In 1902, Bartrum was placed in charge of the newly enlarged Southern Division of the Cascade Range Forest Reserve. After the transfer he continued in the Forest Service and became the first Supervisor of the Umpqua National Forest, serving until 1920 when he retired. A picture of him at a 1907 Roseburg ranger meeting shows him in a business suit and bowler hat, in contrast to the field clothing worn by most of the rangers. [14]

Among the rangers, Cy Bingham and Addie Morris were noteworthy. Bingham was one of those legendary figures who show up often in records of old time rangers. A large, powerful man, standing well over six feet and weighing 258 pounds, he could take a hundred pound sack of flour in his teeth and toss it over his head. He was born in Michigan in 1870, came west, and worked as a miner and cowboy before becoming a ranger in 1903. He worked first in the Bohemia Mining District, then patrolled the forest from the McKenzie River south to Crater Lake. He traveled with his wife, who, like him, loved the outdoor life. He carried with him a timber scribe, and carved his name on so many trees in the high Cascades that at his retirement the Forest Service presented him in jest with a bill for the timber he had cut. [15] He continued with the Forest Service after the transfer, moving to the Malheur in 1907 and retiring in 1920.

Addle Morris was an important figure, largely because his diaries have survived. He was born in Harrisburg, Oregon in 1858. He was appointed ranger by the influence of Senator Thomas Tongue in 1899 at $60 per month, raised to $75 in 1902. His beat covered the area from West Boundary (Lowell) to the McKenzie divide, south to the Umpqua divide and east to Crescent and Davis Lakes. He built a cabin at Big Prairie near Oakridge, as headquarters. He received a Forest Service appointment but left the Service in April 1905 in order to put his children in school. To his diaries we are indebted to much of our information on the work of the Division "R" rangers on the Willamette National Forest. [16]

What were the activities of the rangers? Bartrum's correspondence with Morris, and the Morris diaries, give us a clear picture. In timber sales, for individuals or road supervisors who wanted timber for construction of bridges, the rule was that of free use, up to $20 value; for emergencies, the timber could be used and settlement made later. In grazing, the right of farmers to have a few head of stock was recognized; for the commercial grazers, the system of permits and allocated ranges was adhered to. Permits were to be issued for stock crossings. Morris was asked to gather statistics on homesteads and on all agricultural settlements. Free use of timber for settlers was to apply to dead and down timber only; for sales of standing timber, the areas were to be marked before cutting. Fire notices were to be posted, and reports indicating the cause and size of fires were to be made. In case of large fires, Morris had discretion to hire fire fighters. In case of timber trespass, the trespasser should be assessed $3 per thousand board feet.

Their activities were manifold. Cy Bingham built a cabin at the north end of Crescent Lake, and a series of trails in the high country from Crescent Lake to Diamond Lake and Crane Prairie. He worked on this in 1903 with Addie Morris and A.S. Ireland. Others worked on the Fall Creek trail and patrolled the area around Fish Lake. Patrol work was carried on from the Bohemia mines to Rigdon Ranch and West Boundary. Cabins were built at Rigdon Ranch, Fish Lake, and other areas. A trail was built from Hazel Dell to Foley Hot Springs, and from Foley Hot Springs to Horse Pasture, and up Horse Creek. A horse corral was built at Sparks Lake. A major part of rangers' work was in trail work and maintenance, in much of which they were assisted by campers and settlers.

The diaries of Addie Morris indicate the many duties of the rangers. They included surveying, examination of land claims and timber trespass, patrolling, and issuance of grazing permits. His instructions from the GLO dealt with patrol service, largely simple range riding; timber work, including marking timber, scaling logs, and examining cuttings; survey work, including both running lines and making timber estimates; and a variety of special works, including examining lands and rights-of-way, examining sites for mills, hotels at hot spring sites, reporting on and fighting fire, and examining allegations of game law violations. Other duties included burning brush, planting trees, erecting cabins, and acting as a government witness.

We find preliminaries to the fire lookout system in his diaries. On July 2, 1902, he wrote, "Rode up Lookout Mountain in company with Forest Ranger S.R. Thurston. Used my glass and found no fire in sight. We returned to camp. Distance traveled 8 miles." He dealt with the variety of people traveling in the forest. September 14, 1901, he wrote, "Left camp at 6:45 am. and went to Buck Creek. Met Forest Ranger Thurston. Passed two 4-horse freight teams going to valley, 83 2-horse teams of tourists and emigrants. Passed five bands of Indians for east mountains and returned at 4 p.m. Traveled 30 miles. Put fire notice at Hills. Put out camp fire near Hazel Dell post office."

Many entries are of interest. On July 27, 1903, he wrote, "left camp 7:30 am. on horseback and rode to Rigdon Ranch, found C.J. Bingham and instructed him on his duties as ranger." On July 31, "instructed Forest Ranger F.G. Connely on his duties." January 13, 1903, he collected plants and sprouts to send to the Pacific Coast Laboratory and Plant Improvement Gardens, Santa Ana, California From May until June 1904, he spent a good deal of time in dealing with chittum bark trespass. The bark of cascara tree *(Rhamnus purshiana),* also called bearberry, bearwood, cascara

buckthorn, coffeeberry, coffee-tree, bitter bark, wahoo, and chittumwood, was used a great deal in patent medicines because of its tonic and laxative qualities, and collecting in Washington and Oregon was an important local industry. Large numbers of trees were destroyed annually by peeling. Morris was instructed by Bartrum to look for illegal cuttings in the Fall Creek area, and on May 14 he located the trespass on the ranch of C.A. Logan. A large number of trees had been cut and peeled, and 70 pounds of green bark collected, which would dry to 45 pounds. James Kleinsmith was found guilty of timber trespass. [17]

The work of ranger attracted many applicants; so many in fact that the General Land Office felt compelled to issue a warning. "The large number of applications for positions as forest rangers at the Cascade Forest Reserve Oregon, coming from men of every walk of life, some of them old men and invalids, has led to the announcement that the reserve is not primarily a sanatorium, and that only those will be appointed who are vigilant, vigorous, and fearless in dealing with violations of forest law." [18] Judge John Breckenridge Waldo, in his journal wrote, "The rangers are having a good time; but is this to be deplored? If at the expense of the masses of people, possibly so; but the people will get value received." [19] Generally speaking relationships of the rangers with the people were cordial, and their work in the forest, particularly in improving trails, was highly appreciated.

The period from 1898 to 1905 was an interesting transition time for the Middle Cascades. It was a period of a shift from no management to some management on a capable but not on a professional level. Steps were taken in building what later became the Skyline Trail; some principles of fire control and range management were established; and above all, the area became aware that the forests were under management. A great deal of the Forest Service program was carried over from the GLO administration.

On the national scene, the period from 1898 to 1905 was one of transition, involving a complex interplay of forces. On the political and bureaucratic side, it involved wise land decisions, which were often undercut by petty or corrupt actions. A dedicated field force made up in part of members of Division "R" of the Department of the Interior, and in part of professional foresters from the Division of Forestry in the Agriculture Department, slowly emerged. The public gradually accepted forest management; this acceptance was accompanied by rage at the corrupt forces that hindered such an administration.

NOTES—CHAPTER II

1 This material is conveniently summarized in Jenks Cameron, *The Development of Governmental Forest Control in the United States* (Baltimore, 1928), 220-221.

2 Fred G. Plummer, "Central Portion of the Cascade Range Forest Reserve," 71-146; and Arthur Dodwell and Theodore Rixon, "Cascade Range Forest Reserve Between Townships 18 and 29 South," 144-228, in *Forest Conditions in the Cascade Range Forest Reserve, Oregon,* Professional Paper No.9 Series H, Forestry, 6 (Washington, U.S.G.P.O., 1903). James B. Cox Jr., *Little North Santiam Mining District Cultural Resource Evaluation Report,* (Eugene, OR, 1985).

3 *Forest Conditions in the Cascade Range:* Coville, *Forest Growth,* 29-38; Fred H. McNeil, *Wy'east: The Mountain* (Portland, 1937), 66.

4 Gifford Pinchot, *Breaking New Ground* (New York, 1947, is almost consistently critical of Hermann. Most writers have followed him. On the other hand, his writings and directives indicate some awareness of land problems and of common sense principles of management. He needs a good biography.) Also see Rakestraw, *Forest Conservation,* Chapters 3-6.

5 Binger Hermann, "Government Forests and their Preservation," *The Forester,* 5:4 (April, 1899), 76-79; Hermann, "The United States Forest Ranger System," *The Forester,* 5:9 (September, 1899), 195-199; *The Forester,* 7:12 (December, 1901), 298; Filibert Roth, "Administration of the U.S. Forest Reserves," *Forestry and Irrigation,* 8:4 (May, 1902), 191-193; *Forestry and Irrigation,* 8:6 (June, 1902), 241-243; *Forestry and Irrigation,* 8:7 (July, 1902), 279-282.

6 Gifford Pinchot to Malcolm Moody (n.d.) cited in *The Forester,* 7:4 (April, 1901), 98; Pinchot, *Breaking New Ground,* 193-196.

7 Filibert Roth, "Administration of Forest Reserves," *Forestry and Irrigation,* 8:4 (May, 1902), 191-193.

8 H.D. Langille, "Mostly Division R Days: Reminiscences of the Stormy, Pioneering Days of the Forest Reserves," *Oregon Historical Quarterly,* 57:4 (December, 1956), 301-313; Inspection Correspondence, E.T. Allen, 1899-1905, (microfilm from National Archives in this writer's possession); Elting Morison (ed.) *The Letters of Theodore Roosevelt* (Cambridge, 1950-1953), Vol. 3, 447, 572-573, 594-595; Rakestraw, *Forest Conservation,* 192-194.

9 *Forestry and Irrigation,* 8:6 (June, 1902), 241-243; 8:7 (July, 1902), 279-282.

10 Dana, *Forest and Range Policy,* 122-124; Coert DuBois, "Autobiography" in *The Biltmore Immortals* (Darmstadt, Germany, 1953), 149-197; E.T. Allen, Inspection Corr.

11 Edward Tyson Allen, "The Application and Possibilities of Federal Forest Reserve Policy," *Society of American Foresters Proceedings,* I (1905), 41-52.

12 Haneman and the two Ireland's are mentioned in *Timberlines,* 16 (June, 1961) 6-8, 26-28. A biography of Addison Schuyler Ireland is found in *Timberlines,* 14 (June, 1960) 40-41. Some of Asher Ireland's, younger brother of A.S. Ireland, later diaries while on the Umpqua National Forest are in Special Collections, University of Oregon. The Division "R" rangers and their work are mentioned in the Willamette National Forest Historical Collection (hereafter abbreviated as WNF/H); the *Daily Eugene Guard* in 1898 (August 8th, 9th, and 19th, Sept. 1st, and Oct. 20th) in 1899 (June 21st); *Eugene Weekly Guard* in 1898 (August 6th) and 1899 (June 24th); *Eugene Register* in 1898 (July 26th, August 2nd, 4th, 6th, and 30th, Sept. 7th, and Oct. 14th) and 1900 (Jan. 7th); and the Smith Bartrum papers, University of Oregon Special Collections.

13 *The Ranger* 6:5 (April, 1930), 35.

14 There is a great deal of material on Smith C. Bartrum. Some dealing with his Cascade Range Forest Reserve career include mentions in *The Ranger,* 1:1 (January 15, 1923), 15-16, 6:8 (October, 1931), 44, 7:2 (October, 1932), 20 and 8:1 (October, 1933), 23; *Six Twenty-Six,* 4:3 (February 5, 1920), 16 and 5:5-6 (May-June, 1921), 33; *Timberlines,* 14 (June, 1960), 38 and 19 (June, 1967), 104. The Cyrus Bingham file, WNF/H also has material on Bartrum, as do the Addie Morris papers. See also Bartrum papers, University of Oregon Special Collections, especially the manuscripts "U.S.F.S. History of Early Forest Work" (eight pages) and "Appointment as Ranger, June 1899" (fifty-two pages), which concern his initial appointment and his first summer on what is now the Umpqua National Forest. Other important papers in the collection concern letters of recommendation and appointment as Supervisor for the Southern Division of the Cascade Range Forest Reserve in 1902.

15 Some of Bingham's papers—not the most important ones—are in the University of Oregon Special Collections. The most valuable ones, however are in WNF/H. See also references to Bingham in the *Bohemia Nugget,* published at Cottage Grove, in 1903 (February 20th, July 31st, October 23rd, and October 30th); *The Ranger,* 7:1 (April, 1932), 24 and 45 and 8:1 (October, 1933), 29-30; *Six Twenty-Six,* 15:11 (November, 1931), 5 and 15:12 (December), 10; *Timberlines,* 16 (June, 1961), 2; Jerry L. Mosgrove, *The Malheur National Forest: An Ethnographic History* (John Day, 1980), 108-115.

16 Bingham and Morris files, WNF/H.

17 Morris diaries, WNF/H. On chittum bark, see George B. Sudworth, *Forest Trees of the Pacific Slope* (Washington, U.S.G.P.O., 1908), 404-407.

18 *The Forester,* 5:5 (May, 1899), 118.

19 John Breckenridge Waldo, *Diaries and Letters from the High Cascades of Oregon, 1880-1907.* With an introduction and survey by Gerald W. Williams (Eugene, 1989), entries for July 22, 1901, and September 3, 1903.

CHRONOLOGICAL SUMMARY, 1898-1905

1898

Coville's recommendations to reopen the Forest Reserves to sheep grazing were implemented by the General Land Office (GLO).

The Sundry Civil Appropriations Act (Organic Act) of July 1, 1897 (30 Stat. 597,618) made the first appropriation ($75,000) for protection and administration of the forest reserves. First forest rangers were hired during the summer months of 1898.

Gifford Pinchot succeeded Bernhard E. Fernow as chief of the USDA Division of Forestry, with the title of Forester.

1899

The "Mineral Springs Leasing" Act of February 28 (30 Stat. 908) authorized the Secretary of the Interior to lease ground near or adjacent to mineral, medicinal, or other springs in forest reserves for the erection of sanitariums or hotels, under such regulations as he might prescribe. All receipts were to be covered into a special fund to be expanded in the care of public forest reservations.

The "Public Land Surveys" Act of March 3 (30 Stat. 1074) authorized the Secretary of the Interior to establish all standard, meander, township, and section lines within the forest reserves. The U.S. Geological Survey was to supervise the establishment and marking of the exterior boundaries of the reserves.

Chapter III
TAMING A WILD FOREST: 1905-1933

INTRODUCTION

With the Act of February 1, 1905, which transferred control of the forest reserves from the Secretary of the Interior to the Secretary of Agriculture, management of the reserves entered a new phase. J.R. Bruckart used the appropriate phrase "Taming a Wild Forest" for the changes which occurred in the 40 years after 1905. The term involved professionalization in administration, science brought to the management of the forests, and in the history of the area, the transition from a land of isolated frontier habitations to a series of forest communities.

The act contained several interesting clauses. Receipts from the forest reserves for a period of five years would go to a special fund to be administered by the Secretary of Agriculture for the protection, administration, and extension of the forest reserves. This gave the forests funding independent of Congressional appropriations. It provided that rangers and supervisors be appointed when possible from the states and territories in which the forest reserve was located. This reflected both Western hostility to carpetbag rule and also the recognition that management of the forests was, to a large degree, a matter of public relations. The act also had provisions for the establishment of rights-of-way for ditches, flumes, and the like under permit by the Secretary of the Interior and subject to state laws. [1]

ADMINISTRATION

Pinchot was asked by the Secretary of Agriculture to draft a letter to be issued over the Secretary's signature expressing the administrative philosophy of the new administration. This letter of February 1, 1905, summarized the purposes and spirit of the new enterprise in the following words:

> *In the administration of the forest reserves it must be clearly borne in mind that all land is to be devoted to its most productive use for the permanent good of the whole people, and not for the temporary benefit of individuals or companies. All the resources of forest reserves are for **use**, and this use must be brought about in a thoroughly prompt and businesslike manner, under such restrictions only as will insure the permanence of these resources. The vital importance of forest reserves to the great industries of the Western States will be largely increased in the near future by the continued steady advance in settlement and development. The permanence of the resources of the reserve is therefore indispensable to continued prosperity, and the policy of this department for their protection and use will invariably be guided by this fact, always bearing in mind that the **conservative use** of these resources in no way conflicts with their permanent value.*
>
> *You will see to it that the water, wood, and forage of the reserves are conserved and wisely used for the benefit of the home builder first of all, upon whom depends the best permanent use of lands and resources alike. The continued prosperity of the agricultural, lumbering, mining, and live stock interests is directly dependent upon a permanent and*

accessible supply of water, wood, and forage, as well as upon the present and future use of their resources under businesslike regulations, enforced with promptness, effectiveness, and common sense. In the management of each reserve local questions will be decided upon local grounds; the dominant industry will be considered first, but with as little restriction to minor industries as may be possible; sudden changes in industrial conditions will be avoided by gradual adjustment after due notice; and where conflicting interests must be reconciled the question will always be decided from the standpoint of the greatest good of the greatest number in the long run.

These general principles will govern in the protection and use of the water supply, in the disposal of timber and wood, in the use of the range, and in all other matters connected with the management of the reserves. They can be successfully applied only when the administration of each reserve is left very largely in the hands of the local officers, under the aye of the thoroughly trained and competent inspectors

Very respectfully,
James Wilson
Secretary [2]

All this created a revolution in administration. The Forest Service was put under Civil Service and career men replaced political appointees. The office of Inspector for a given district was established to give oversight for a given region. By an administrative act of 1908 the Office of Inspector was changed to District (now Regional) Forester, aided by a staff of technically trained foresters in charge of various lines of work (see charts next page). From that time on forest administration was decentralized, with the bulk of the forest work handled by the District and by the various forests within the district. Only questions of large importance or on national policy were referred to the Washington Office. [3] District 6 comprised the States of Washington, Oregon, and Alaska with a small part of Idaho. (Alaska became a separate Region in 1919.) It was an ingenious arrangement which avoided both a bureaucratic, centralized administration and an inefficient, decentralized administration, and was a major source of strength in national forest administration. [4]

Edward Tyson Allen was the first District Forester. He was the son of a Yale professor who had left the academic life when his son was a small boy and homesteaded on the upper Nisqually River near Mt. Rainier National Park. Allen had no formal schooling but was tutored at home by his parents. In 1898 Pinchot met Allen, who was then working as a reporter on a Tacoma newspaper, and persuaded him to join the Division of Forestry. Allen worked in the Pacific Northwest, Idaho, Colorado, and Utah both for the Bureau of Forestry and for Division R (for reserves), and served as the first state forester of California, 1905-1906. He reentered the Forest Service in 1906 coming to the Northwest as Inspector with the transfer of the reserves to the Department of Agriculture and became District Forester in 1908. He retired from Federal employment in 1909 to work for the Western Forestry and Conservation Association. His major accomplishments in the District were to upgrade the field personnel and to work with lumbermen and state officials against the common enemy, fire. [5]

Allen was succeeded in 1909 by Charles S. Chapman. Chapman, born in Connecticut, was a member of the first class to be graduated with a masters of forestry from Yale Forest School in 1902. He worked for the Bureau of Forestry from 1902-1905, served as forester for the E.P. Burton Lumber Company in South Carolina from 1905-1907, and then returned to the Forest Service. He served as District Forester for slightly over one year. Like Allen, he contributed a great deal to good relations with the lumber industry, especially in the area of fire fighting. Chapman resigned in 1911 to become the secretary and manager of the Oregon Forest Fire Association. After WW I, Chapman worked for the Western Forestry and Conservation Association, then in 1924 he became forester and manager of the Weyerhaeuser Lumber Company in Tacoma [6]

Chapman was succeeded by George H. Cecil, a native of Massachusetts, who began working in the family shoe leather store in Baltimore. Cecil read an article on forestry by Gifford Pinchot in the *Youth's Companion,* and in 1902, at the age of 25, enrolled in the Biltmore Forest School. He graduated a year later and joined the Bureau of Forestry, working in Texas, Tennessee, and West Virginia, then passed his Civil Service examination in 1906 and went to work in the Yellowstone Forest Reserve. Then he spent a year in District 1 (Missoula), before transferring to Portland to work under Allen as Associate District Forester. In April 1911, he took over as District Forester, which he held for 14 years. A very warm individual with a capacity for making friendships, he did much to keep up the morale of the Forest Service in the Region. He, like Allen and Chapman, worked with industry and did much to create an efficient fire control administration. He inaugurated Forest Protection Week in Washington and Oregon in 1920. Outdoor recreation was growing fast, sparked by the ownership of private automobiles. There was a national and Regional effort to provide areas for summer homes, resorts, and campgrounds. Roads leading to and through the mountains brought crowds of summer travelers: Existing roads were improved and several important new roads were constructed, including the Columbia Gorge Highway. He left Portland on December 31, 1924, to be the Forest Supervisor on the Angeles National Forest in Region 5, which was experiencing major fire problems due to the expanding urban population. He resigned from the Forest Service in 1929. His administration had been so successful that the city offered him the position of manager of the Conservation Department for the Los Angeles Chamber of Commerce and executive secretary of the Conservation Association of Southern California. [7]

Cecil was succeeded by Christopher M. Granger in early 1925. Granger was a graduate of Michigan State College in 1907. He spent most of his career in the Rocky Mountain District (Region) on the Medicine Bow and Pike National Forests, as well as in the Regional Office and Washington Office. While in the R-6 Regional Office, he was instrumental in the development of amenity values in the northwest, such as aesthetic timber cutting along roads, campgrounds and summer homes, and also in wildlife management. He served until 1930, when he was transferred to the Washington Office to develop the national timber survey (Forest Resource Survey) called for by the McSweeney-McNary Act and the Forest Service's part in the Civilian Conservation Corps program. [8]

Granger was succeeded by Clarence John Buck in 1930. C.J. Buck, born in Massachusetts, earned a B.A. degree from Williams College and was a M.F. graduate of Yale Forest School in 1905. He served first in the Trinity National Forest, then to the Klamath National Forest, and

finally to the Crater (now Rogue River), before being transferred in 1908 to the District (now called Regional) Office in Portland and put in charge of lands. He served as Regional Forester until 1939 (more information about C.J. Buck in Chapter IV). [9]

Pinchot established a section of special investigations, which by 1908 had division status, with experiment stations set up in the West. In Region 6, research was a division of silvics which was under silviculture, headed by Fred Ames. Thornton T. Munger headed the silvics section. In 1915 a separate division of research was set up in the Washington Office under Earle Clapp. On the regional level there was a new division of research. New research stations resembled the agricultural experiment stations established by the Hatch Act of 1887. They were independent of the Regional Office, their directors and staff reporting directly to the Washington Office. However, much of their work was spent in study of Regional matters which were often applied to forest management, and there was a close cooperation between research and administration. [10]

Something should be said about the relationship between the staff who were graduates of forestry schools, or in the terminology of the time—"technical foresters" and the Forest Service men who had learned in the "University of Hard Knocks." During the early period the rangers and supervisors were men who had for the most part no formal training in forestry, but who applied skills learned in the out-of-doors and who lived as members of the local community. Their strength was their knowledge of the country and their ability to earn the trust of the stockmen and lumbermen. The technical men on the other hand were largely easterners who did not know the country or the people. There grew to be occasional conflict between easterners and westerners, both within and outside the Forest Service. Pinchot himself had been able to earn the trust of westerners by his ability to ride, shoot, and adapt to frontier folkways. But there were occasional technical men who did not know what side of a horse to get on, and Seth Bulloch, Supervisor of the Black Hills Forest Reserve, quit because he objected to technical foresters spouting scientific names of trees. E.T. Allen, after taking out a group of student assistants, wrote to Pinchot that his first task was to take them into the woods "to get the Harvard rubbed off." As late as 1915 the foresters had heated discussions on the relative values of technical and practical men. [11]

Within the national forests of the Oregon Cascades, meantime, the administration was decentralized for better management. To the north, the Oregon National Forest was created in 1908 consisting of Mt. Hood and its environs south to the Willamette Valley and Cascade Mountain (Santiam) Wagon Road. The Cascade National Forest was established south of the Santiam Wagon Road to the Willamette River. The Umpqua National Forest was established between the Willamette River and the Rogue-Umpqua Divide, while the Crater (now Rogue River) National Forest was established south of the Rogue-Umpqua Divide to the Oregon-California border. In 1911, major boundary shifts occurred, with the Cascade NF gaining the land from the Willamette River south to the Willamette and Calapooya Divides, while losing land east of the crest of the Cascades and the land north of the Linn-Lane County line to the new Santiam NF. The Santiam also took the area from T.8 S. to 13 S. at the expense of the Oregon (now Mt. Hood) National Forest. To the east across the Cascades, the Deschutes National Forest was established in the drainage of the Deschutes River. Finally in 1933 the Santiam and the Cascade were consolidated as the Willamette National Forest.

Boundaries on the western side were in a rectangular pattern following the conventional General Land Office survey. Boundaries among the national forests on the east and the north/south boundaries between national forests, on the other hand, followed mountain ranges or river drainages, or other natural boundaries. The internal boundaries between ranger districts also followed the logic of geography and were made on the basis of transportation, economic interests, watersheds, and the like. A series of ranger districts were established: West Boundary (near the present site of Lowell), Oakridge, McKenzie Bridge, Detroit, and Cascadia (now relocated to Sweet Home).

Smith Bartrum, whom we have already met, continued as Supervisor of the Cascade until the reorganization of 1908 when he went to the Umpqua. He was succeeded by C.R. Seitz (1878-1941) who was an engineer by training, who joined the Forest Service in 1907 on the Whitman National Forest and went to Eugene as Supervisor. He served there until 1919. His engineering training is reflected in his work on improvements, cabins, houses, trails, telephone lines, and the like. He developed the Seitz camp stove, and trained Corley B. McFarland, Smith Taylor, and B.F. Heintzleman. [13] Nelson Macduff, described by Harold Engles as "a very, very fine man, a scholar and a gentleman," served as Supervisor in the Santiam 1911-1912 and in the Cascade 1920-1930. He was born in Ohio, the son of an Episcopal priest; graduated in forestry from the University of Michigan, first served in the Siskiyou and then in the Santiam and the Cascade. He was shot in 1930 in what is still an unsolved mystery. [14]

In the Santiam after a year with F.H. Brundage as Acting Supervisor, Charles Chandler (C.C.) Hall came in serving until 1933, when the Santiam and Cascade were combined to form the Willamette. C.C. Hall was born in 1870, and he joined the Forest Service in 1906 a graduate of the "School of Hard Knocks." He served first in the Hellgate area in Montana, then became a ranger in 1907 and worked in the Big Hole area in the Deerlodge National Forest. He became Supervisor there in 1907. In 1910 he was transferred to the Southwest becoming Supervisor of the Tonto. He came to the Santiam in 1916.

He was the type of Supervisor around whom legends grow. A small, tough, well-built man, with high cheek bones, protruding eyebrows and sparkling gray-green eyes, he is the subject of many stories: How in Montana sheepmen and cattlemen allied themselves against the Forest Service and drove unpermitted stock on the range at night, and how he armed himself, called a meeting of all the permittees, and told them to shape up; how, in a timber sale, logs were put in a flume before they were scaled and stamped, and how he cut the flume and telephone line and let the logs pile up, and forced the operators to have the logs scaled and stamped.

Supervisor Hall was a field man who spent most of his summer time at Fish Lake. There he set up a sawmill to produce lumber for building Forest Service sheds and houses. It was a small affair, cutting about 1,000 board feet a day, and was manned by the protective staff. He was responsible for a great deal of road and trail building and was a strict enforcer of game laws. [15]

Among the rangers, Smith L Taylor served in the McKenzie Ranger District from 1909 to 1932. He was a veteran of the Spanish-American War who joined the Service in 1905, and came to McKenzie Bridge as a guard in 1909. A tobacco-chewing outdoorsman of the old school, he was noted for his community service. After retirement, he was one of the founders of the McKenzie

River Rural Electrification Administration (REA), and served on the McKenzie River School Board. He died in 1957 at the age of 84. [16]

On the Cascade, Perry A. Thompson succeeded Macduff in 1930. Thompson came to the Cascade from the Colville NF where he had made a good reputation for his work in multiple use. His letters show him to be a witty, visionary individual. He was strongly interested in the possible use of the autogyro in forestry work. His major work was in the Civilian Conservation Corps (CCC) era which will be dealt with later. He continued as Supervisor of the Cascade until it was merged with the Santiam to form the Willamette in 1933, and was Supervisor of the Willamette until 1939. [17]

There were, in addition to these, a variety of visitors from the District Office or the Washington Office who came and went in the Cascade and Santiam Forests. They were research men like Thornton T. Munger, who set up in the Willamette the first experimental plots west of the Mississippi; grazing specialists like John C. Kuhns, who carried on intensive grazing studies in the forests; recreationists like Fred Cleator, looking over the possibilities of a skyline highway; and takers of timber inventory like B. Frank Heintzleman, then beginning his long and fruitful career. Another notable who began his career in the area was George Drake, who came to the McKenzie Bridge fresh out of Penn State to start his career as a public and private forester.

Women also played an increasingly important part in forest administration. The early rangers like Cy Bingham and Archie Knowles took their wives along with them to share in the work and amenities of the foresters' life. [18] Women played a professional part in Forest Service work after 1908 with the establishment of a District (now Regional) organization. From Washington came a transfer of a large number of the Washington Office staff to the new Regional headquarters. Will C. Barnes commemorated this in verse:

> Oh, they're whispering in the corners
> and talking in the hall
> They are scheming and a-planning
> Where to migrate in the fall,
> They are telling one another
> Of the places they like best;
> Oh, the whole blamed outfit's 'locoed'
> 'Cause we're going out West.
>
> "Have you ever lived in Portland?"
> "Is it wet or is it dry?"
> "Do you think you'd like Missoula?"
> "If you do, please tell me why."
> "Is the living high in Denver?"
> "Are the ladies there well dressed?"
> Oh, these are the burning questions,
> 'Cause we're going out West.
>
> "Now I want to go to Frisco

Even though the earth does quake."
Well, I'm wild to see a Mormon
So I'd much prefer Salt Lake."
"Do you think that I'll get homesick?"
"Are the Frisco fleas a pest?"
What a turmoil has been started
'Cause we're going out West.

"Oh, they say that board's expensive
In the town of Albuquerque."
"But you needn't take a streetcar
For to reach your daily work."
"Well, I've heard the living's awful
(Now please don't think me silly)
But really, do they live out there
On only beans and chili?"
Oh, such like doubts and troubles
Daily agitate the breast
Of each one in the Service
'Cause we're going out West. [19]

Forest Service records indicate that women were mostly employed during this period as stenographers, file clerks, and in drafting, After 1913 there was occasional employment of women as lookouts and fire patrol, especially in World War I and afterward. However, they were not allowed to fight fires.

The Supervisor's Office for the Santiam National Forest was located at Albany and for the Cascade in Eugene. They had, during this period, a small permanent staff. In 1925, Supervisor Nelson Feris Macduff of the Cascade had two technical assistants, one superintendent of construction, and one clerk. One timber sale officer and one scaler also operated out of this office, although they were in the field most of the time. Supervisor C.C. Hall of the Santiam had one assistant supervisor, a woman clerk, and three timber sale officers. Staff increased in summer months as the fire season came on.

The ranger districts were established according to need and transportation lines. The five oldest districts which had existed since the beginning of the forest were the McKenzie, West Boundary (now Lowell), Oakridge, Detroit, and Cascadia (now Sweet Home). The Cascadia and Detroit Ranger Districts became part of the Santiam National Forest in 1911. With the 1940s there came other divisions as the work of the forest became more intensive.

This was the era of horse and buggy transportation with few roads and few accommodations. Ranger headquarters were usually buildings having room for the necessities of the time—an office with telephone, sometimes a telephone switchboard, typewriter, and filing cabinet. This office would be occupied by the ranger and his clerk who usually doubled as phone operator and fire dispatcher. Another room with equipment for fire control and for drafting was on the ground floor. Usually there was a loft for storage and for accommodating guests. Other accommodations

included barns, equipment sheds, warehouses for fire equipment, and the like. There were pastures nearby for the stock. There were, in addition to ranger headquarters, a large variety of cabins for ranger field stations or for shelters for field forces. They varied a great deal, ranging from rather primitive accommodations, such as the still existing cabin at Independence Prairie to small, neat guard stations on main traveled routes.

LANDS

In 1918 C.J. Buck summarized the Forest Service lands policy and problems. The objectives of the Service were to protect and administer Forest Service lands, to achieve satisfactory boundaries for the forest, and to release agricultural lands from the forests. They involved the classification of all lands using, if necessary, experts from other agencies including especially the Bureau of Soils. Fraudulent claims, largely mineral and timber claims, were to be restored to the national forest jurisdiction. Some policy should be adopted for the exchange of non-forest land for private inholdings. Some special acts of this nature had already been passed in respect to the Paulina, Whitman, and Ochoco National Forests; but there was need for a general exchange act. Grazing regulations should be reviewed. In recreation, term leases should be permitted for summer hotels. Campground sites should be established as rapidly as funds permitted. Term leases should be made for summer homes, and a survey of suitable areas for summer home sites should be made. In regard to national park proposals, Buck felt that parks should be created to serve the needs of the nation as a whole rather than local groups; that they should be areas having natural wonders of national importance; that they should be suited both for scientific study and recreation; and that they should be comprised of suitable administrative units. [20]

During the period 1905 to 1913 there were many changes and adjustments made in lands located within the national forests. In the period 1905 to 1907 there were major efforts made to enlarge the area of the national forests to include suitable forest land. This initial period of acquisition came to an end in 1907 when Congress passed legislation requiring Congressional approval for new national forests. In the middle Cascade area a series of additions were made as a result of investigations by the Bureau of Forestry and Division R of the Land Office. These additions were made in the townships to the west of the forest boundaries, and were composed of those portions of townships in which a large part of the land had been alienated. They included T. 8, 9, 10, 12 and 14 S., R. 4 E. In 1907, T. 11, 12, and 13 were added. The alienated land was largely in the hands of lumber companies, homesteaders, and wagon road companies. [21]

Within the national forests, however, there was a great deal of alienated land in the form of mining claims, Timber and Stone Act of 1878 entries, squatter's claims, homestead entries, wagon road grants, and state school lands. Each type of entry deserves particular attention.

THE TIMBER AND STONE ACT

The Timber and Stone Act (1878) provided for the sale in the states of Washington, Oregon, California, and Nevada—later extended to all public land states—of 160-acre tracts of surveyed, non-mineral land chiefly valuable for timber and stone, and unfit for cultivation, which had not been previously offered at public sale. This public domain land was offered for sale at not less than $2.50 per acre. The purchaser had to swear that the land was being acquired solely for his

own use and benefit, and also that he had made a personal examination of the land. The intention of the act is difficult to determine. If the primary intent was to provide settlers with a supply of wood, it could have been achieved by extending the Free Timber Act of the same date to the Pacific Coast states as well as the Rocky Mountains. On the other hand, if the act were for the benefit of the timber industry the maximum of 160 acres is on the small side. The act was not repealed until 1955. [22]

Bona fide settlers made little use of the act. They were, in the Northwest, more concerned with clearing off heavy timber already on their claims rather than acquiring more trees. The act was used chiefly by commercial timber operators to build up large holdings of valuable timber land, with fraud playing a large part in the process. A Supreme Court decision aided this fraud. It declared that a person who planned the immediate sale of his timber claim to another party was nevertheless taking it up for "his exclusive use and benefit" unless collusion to sell the tract prior to making the entry could be proved—obviously a difficult task. The original purchaser from the government did not even have to await issue of patent; he could sell immediately on receipt of a certificate of patent, and thereafter any number of transfers could be made. In Oregon, Timber and Stone entries to 1904 totalled 13,065 and 1,937,206 acres. Investigation by the Public Lands Commission of its abuse in three counties of Washington and Oregon showed 14-25 percent of the entries made by women, and 44 percent by non-residents of the area. Fifty percent were transferred to lumber companies at prices as low as a glass of beer, and as high as $3,000 per quarter section. Fraud in the Timber and Stone entries led Secretary of the Interior Ethan Hitchcock to suspend all activity on Timber and Stone entries in Washington, Oregon, and California by departmental order, November 18, 1902, pending investigation. [23]

A large number of Timber and Stone entries were made in the Middle Cascade area, most of them in the area to the east of Detroit and to the west of Cascadia. Many were made in the interests of the C.A. Smith Company, particularly in T. 13 S., R.3 and 4 E. Many of these lands were involved in the Oregon land fraud trials and were returned to the public domain. But collusion is difficult to prove. The Forest Service investigated scores of Timber and Stone claims and presented such evidence of collusion as was available to the General Land Office, which made the final decision. However, the General Land Office was noticeably more favorable to the claimants than was the Forest Service. Some of the frustration of the Forest Service is illustrated in the following letter from the Forest Supervisor:

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Cascade National Forest.

Peter J. Johnson T.&S. Entry #14355
Roseburg Land District
Cascade.

Eugene, Oregon, Aug. 17, 1908

The Forester,
Forest Service,
Washington, D.C.

Dear Sir:

I enclose a report on this case and have sustained the ranger's recommendations that further investigation be made.

Now, it is not possible for this office to make any further investigation because of the claimant being a nonresident and the delicate character of the work necessary to secure information. This claim lies in the vicinity of a great many claims that were mixed up in the Oregon land frauds, and I have good reason to believe that there was collusion on the part of the entryman and agents of Fred A. Kribs with reference to this entry; but I am not in a position to make a definite charge nor to secure the evidence necessary to show such collusion.

I have discussed the matter fully with the Chief of Field Division and reached the agreement that I should get all the information possible, make my report on the case, and that his office would endeavor to secure any information obtainable, showing collusion. Therefore, it is recommended that any section on the entry be suspended, pending the investigation by the office of the Chief of Field Division, to whom I am forwarding a copy of my report and such information as I have obtained.

I believe a great deal more can be accomplished in this way then to expect the rangers, whose other duties prevent them from giving a great amount of time to each individual case, to obtain information pertaining to fraudulent and unlawful agreement on the part of the entryman.

Very truly yours,
Forest Supervisor. [24]

MINING CLAIMS

Mining claims on the national forests were, and are, a continuing problem. Mineral land laws were capable of being abused as well as used legitimately. First, the background needs to be given and then its application in specific areas.

The General Mining Law of 1872 was passed to affirm to principle that gold and silver belong to the person who finds it. The miner would "stake his claim," 1,600 feet by 500 feet, or about 20 acres, with a minimum of paper work. This was for placer claims. Lode claims could measure 1,500 feet in length, with 300 feet on either side of the middle vein, all in parallel lines. An association could file on 160 acres. Then at the cost of $2.50 per acre for a placer claim, or $5.00 per acre for lode, the claimant could become the outright owner of the minerals and also of the surface of the land with no obligations to pay royalties on production. There were no limits on the number of claims on which an individual or association could file. The prospector, who might be a corporate prospector, did not need to hurry to mine or seek patent; he could hold his claim indefinitely by performing annual assessment work to the amount of $100 per year on the claim. This work was usually affirmed by affidavit, seldom by on site inspection. [25]

In the national forests, such laws were subject to abuse. Sometimes mining claims were not used for mining but for homesites, fishing/hunting camps, saloons, or houses of prostitution. At times mining claims were "blocked in," that is, located to prevent timber sales or access roads thus thwarting management plans. Sometimes mines on national forest lands were mined of valuable timber. Mines on the national forests also involved the need for close inter-agency cooperation between the General Land Office, which gave title to the land, and the Forest Service. Such cooperation was not always forthcoming.

With this background, the mining claims in the area under study may have been examined from the time the Cascade Range Forest Reserve was established until about 1940. Over the years almost every township in the area was visited by miners and a large number of claims filed. In the Blue River area there was extensive mining activity in T. 15 and 16 S., R. 4 E., and a fairly large development took place in lode claims. They played a large part in the economic development of the community, but by 1912 the mines had played out. The mining properties were deserted and became something of a tourist attraction. [26]

The major controversies over mining claims came in the northern part of the area. One was around the Breitenbush Hot Springs. The hot springs were managed as a resort area. One section had been homesteaded and was privately owned; another area was leased to Mark Skiff under a special use permit. Mining claims were filed close to these claims by J.L Hill and E. O'Hara as the El Dorado and the Ironside lodes. Examination indicated that there was no mineral on the claims, and the claims were probably made to harass Mr. Skiff and obtain possession of the hot springs. These mining claims were abandoned in 1913. [27]

A series of continuing problems dealing with mining claims revolved around mines in the Little North Fork of the Santiam area, T.8 S., R.5 E. A number of mines were located and some large scale development work occurred during the 1920s and early 1930s. R.A. Elliott, Detroit District Ranger, reported to Supervisor Perry A. Thompson in 1933 that the claims numbered from 100

to 115, mostly filed after 1929, and some bought from earlier holders. Some $300,000 had been spent. Thirty-five men were employed and half a million feet of timber used. Slash was becoming a problem and Elliott ordered the company to burn the slash. A year later Elliott reported that the slash had been burned satisfactorily but that the companies wanted a wood contract. They had cut 250 cords of timber already and wanted a sale for 700-1,000 cords. This was more than Elliott could make in a ranger sale. In addition some of the cutting had been carried on in trespass, the cutting occurring half a mile from the claims. The Forest Service law office was notified.

In the same year (1933), the owner of the Amalgamated Mining Corporation, James Hewitt, informed Elliott that he wanted land for a dam, a flume to produce hydroelectric power, a dam reservoir, and a clarifying basin. Supervisor Thompson informed him that he could get a permit from the Forest Service for the dam and flume, but production of power would have to go through the Federal Power Commission. By September, Hewitt wanted a special use permit for a stamp mill. A ruling from the Regional Office's law officer, W.F. Staley, held that Hewitt would need a special use permit for the mill and should file a millsite claim on the land desired. He added that the mill was not covered by mining laws: "Crushing or reducing of ores is in fact a separate industry from the extraction of mineral from the claim." He added that the millsite should be on non-mineral land, and that timber cutting on the site was an administrative matter.

A further round of controversy came about over roads. Hewitt had built a road into the area without first acquiring a permit, and had put up a gate. Supervisor C.C. Hall had held that to be "innocent trespass," and in 1930 offered Hewitt a special use permit for the road. Hall held that first, the road was in trespass; second, that the location was bad; third, that the road gate allowing only company use, was valid for a private road. Forest Service personnel, however, were given a key to the gate. Meantime, Hewitt had a bill introduced in Congress to compensate the company for the cost of the road.

Problems with the road continued with a new round of controversy in 1938. A right-of-way deed was offered to Hewitt in July 1938, but Hewitt held that a public road would be detrimental to mineral development, that watchmen would be needed, but that the Forest Service could use the road and be given a key to the gate. F.V. Horton, of the lands office, stated that a right-of-way would be needed to improve the road beyond the claims. C.J. Buck wrote to the Chief Forester in October 1938, stating the Forest Service views. The Forest Service wanted to extend the road to the Breitenbush watershed. The company had no objections to road construction and maintenance except for the closed section. In addition, the road location was bad. It had followed an old trail and could be relocated. The company's refusal came from the desire to be compensated for the initial work they had done in building the road; George La Roche, attorney for the Amalgamated Corporation, gave the company's side in a letter to Horton. The road was about four and a half miles long, extended over perfected claims, and was built by the company. It had not been publicly financed. Verbal permission was given to the Forest Service to use the road; but new questions were raised with the filing of new claims,

The questions boiled down, then, to the following: First, could the company be compensated for their expense in building the road? Such compensation would require Congressional action. Second, could the Forest Service secure a right-of-way that would give them access to the

roadway, and the right to improve it? And third, would it be desirable for the Service to acquire the road? The Hewitt view was that the road should not be improved, since it would lead to public trespass. He suggested that a new road be built into the area with the government bearing the cost of construction and responsibility for maintenance. The legal question was submitted to law officials of the Forest Service. C.L Stewart, of the Regional law office, in an opinion dated June 15, 1939, stated that L-18 regulation subjected mining locations to United States governmental use for relocating and improving roads, provided that there was no interference with the claims. He cited a solicitor's opinion of January 4, 1915 which stated that the government could regulate occupancy, and held that the government was authorized to remove the gate. From the Washington Office of the Forest Service on the other hand, law officer Carl C. Donaugh commented that the Forest Service would need permission of the company to remove obstructions.

By 1945 an accommodation was made. The Amalgamated Company, which by this time included a large number of subsidiaries, was opposed to a right-of-way but needed a better road with some governmental responsibility for its construction and upkeep. On November 20, 1945, an agreement was made to allow the government to have right-of-way and to make improvements on the road in parts of sections 27, 28, 29, and 30, limited to a 25-foot strip. [28]

WAGON ROAD GRANTS AND SCHOOL LANDS

Historically the United States has used land as a substitute for capital in aiding agriculture and education. In the Santiam National Forest across T.13 and 14 S., the Willamette Valley and Cascade Mountain Wagon Road, usually referred to as the Santiam Wagon Road, crossing from Cascadia to Prineville, was built with the aid of alternate odd numbered sections to a distance of three miles on either side of the road. These lands were acquired by the successor companies Porter Brothers and the Oregon Western Colonization Company, and held by them for speculative purposes. The total land was about 45,000 acres. Some sections had been sold to lumber companies, and at Fish Lake the company had built a roadhouse. In the Cascade National Forest to the south, 41,311 acres were included in a grant to the Oregon Central Military Wagon Road extending from Eugene through Oakridge and across the Cascades to eastern Oregon. This was also in the form of alternate odd-numbered sections on each side of the road. These lands were acquired in 1903-1904 by the Booth-Kelly Lumber Company through a subsidiary, the Oregon and California Land Company. Some of the eastern sections were sold by the Oregon and California Land Company to the Penn Lumber Company of Warrentown, Pennsylvania, which planned to log their sections when the railroad crossed the pass. [29]

In Oregon, the 16th and 36th sections of each township were reserved as school sections. This meant only sections which had been surveyed. Lands which had not been surveyed and had plats deposited in the district Land Office remained in the hands of the Federal government. An interesting judicial decision, which involved both wagon road grant lands and school lands, involved the question as to whether a section which had been partially surveyed qualified for transfer. As every forester knows, surveyors first lay out the township and range lines dividing the area into squares six miles on each side. One township was surveyed, but the sections not laid out. Claimants argued that section 36 had been surveyed since the south and east boundaries were drawn, but the court held this was not the case. [30]

These lands gave the Forest Service a variety of administrative problems. Sheep herders might be held in trespass if they failed to examine an imaginary line that separated private or state land from Federal land. Fire on private or state land might spread to Federal land. Legislative measures were sought. In regard to mining and to the Timber and Stone Act, little was done until the 1950s. More success came with school lands. An exchange was made with the State of Oregon in 1920 in which the inaccessible school sections within the national forest boundaries were exchanged for national forest lands in the Coos Bay area. The area had been the site of a large forest fire but had now seeded into a dense stand of "third growth"—the term used for growing young unmerchantable trees. This area was named the Elliot State Forest after Frank Elliot the first Oregon State forester. More importantly, in 1922 a General Exchange Act was passed. This act authorized the Secretary of Agriculture (through the Secretary of the Interior) to exchange surveyed, non-mineral land, or timber on national forest land, for privately owned or state-owned land within the national forest. The exchange of land or timber was on a value-for-value basis. [31]

These acts were of great value in consolidating Forest Service ownership. A number of exchanges took place, largely in the Santiam, of cutover land suitable for growing trees or other Forest Service purposes, for timber lands or timber of equal value. The exchange was of value at the time since the tax system of Oregon was such that the timberland owner could not profitably hold his acreage for a second crop; the yield or severance tax was some distance in the future. Consequently, many of the transactions involved trading of cutover land for timber accessible to the company's mills. In such exchanges the value of the land was appraised and the volume and value of timber determined by cruise. Cutting was under Forest Service regulation. A large number of such exchanges occurred in the Cascadia and Detroit areas, and Booth-Kelly exchanged some of the land in the more mountainous areas for timber accessible to their mills. [32]

AGRICULTURAL LANDS, HOMESTEADERS, AND SQUATTERS

It was the policy of the forest administration both during Land Office days and with the transfer to the Department of Agriculture to eliminate agricultural land from the national forests. In the Land Office days this took the form of asking rangers to report on homesteads within the national forests. For example Addie Morris compiled a list of homesteads, most in T.21 E., R.1, 2, & 3 E. [33]

These homesteads were of various types. The better farming lands, mostly on the western borders of the forest or along the routes of wagon roads, were taken up at an early time. For the most part they were small operations, combining gardening and stock raising with some catering to tourists, some small logging operations, and some sale of shakes or chittum bark. In the Cascade National Forest a 1916 survey showed that some 10,728.52 acres had been acquired under the homestead laws, mostly for *bona fide* homesteads. In the Santiam National Forest there had been widespread use of the homestead laws to get title to homesteads to be sold to lumber companies. Arthur E. Wilcox wrote of T. 10 S., R. 7 E. in describing 3,835 acres alienated "almost invariably these homesteads are located in the heaviest timber." [34]

The Forest Service men located, surveyed, and described homesteads and other settlements. Among these were a large number of squatter's locations—that is, cabins and clearings made by people who had not bothered to file their claims in the Land Office. Most had abandoned their claims. In such cases the Forest Service would survey the claim, get testimony from people acquainted with the squatter as to his time of occupancy and activities, and then send him a notice that his claim would revert to the national forest unless he desired to contest the decision. Most did not. [35]

On June 11, 1906, legislation was signed that intended to help the Forest Service speed up the process of classifying agricultural land. The Forest Homestead Act provided that the Secretary of Agriculture could open for homestead entry, through the Secretary of the Interior, lands chiefly valuable for homestead purposes which might be occupied for agricultural purposes without injury to the national forest. Since most such lands were in narrow, shoestring valleys, survey was by metes and bounds rather than the customary rectangular survey. The area could not be over 160 acres; the dimensions, not more than a mile in length. Commutation—purchase of the land in lieu of residence—was not permitted. [36]

The Forest Service had hundreds of applications under the act, some by *bona fide* settlers, and from others who saw this as another Timber and Stone Act to be used in land grabs. The Forest Service administered the act in a very conservative manner. In a Supervisor's meeting of March 1910, R.E. Benedict, Supervisor of the Olympic, pointed out that there was still a great deal of land suited for agriculture outside the national forests. He urged examiners to bear these factors in mind: Whether the area was needed for public purposes, such as campgrounds, recreation areas, town sites or Forest Service administrative sites; whether the land was needed for forest purposes, watershed values, community forest use, or prevention of erosion; and whether the land was good agricultural land. [37]

Files on the claims indicate that the forest examiners were cautious in their interpretation of the June 11th law. Some forest homesteads passed to patent on bench lands and in river valleys, but often the original claim was reduced in size by eliminating land more suited for growing trees, or of potential use in recreation, or for logging roads. There were some efforts at fraud including attempts to use the June 11th Act to obtain hot springs or create timber claims, or to enlarge mineral claims. [38]

The classification was slow and in 1912 Congress speeded up the process. A rider to the Agricultural Appropriation Bill of April 10, 1912, ordered the Secretary of Agriculture to "select, classify, and segregate, as soon as practicable, all lands within the boundaries of the national forests that may be opened to settlement under the homestead laws applicable to the national forests." Most important, the requirement was funded to the tune of $25,000 for the first year, $10,000 for the year after, and with subsequent funding until the land classification was completed. The Service set to work on the tremendous task of identifying and segregating the agricultural lands. In the Santiam and the Cascade National Forests the task was completed in 1916. That task in the Santiam was administered by Arthur E. Wilcox, a Michigan State College graduate who had had experience in stock raising and farming, and who had already examined 15,000 acres of June 11 claims. In general he found little agricultural land in the San tiam, only about 400 acres at most more suitable for agriculture than forest growth. The Cascade

classification was done by T.M. Talbot, 3,812 acres had previously been classified under the June 11th Act, and most of this was taken up by 1916. [39]

One effect of the June 11th Act was to speed up selection of administrative sites by the Forest Service as sites for ranger stations and other administrative uses. Such sites had to, of necessity, have water and land for pasture for the horses. Forest Service policy was that no agricultural land could be used for administrative purposes when it had also been applied for under terms of the June 11th Act. Therefore the Forest Service was asked to make its withdrawals in advance. [40]

LIEU LANDS AND LAND FRAUD

One problem which plagued the Forest Service was the lieu land provision of the act of 1897. It authorized the settler or owner of a tract of land within the national forest covered by an unperfected *bona fide* claim, or by a patent, to relinquish it to the government, and in lieu thereof to select a tract of vacant land open to settlement and not exceeding in area the tract relinquished. With unperfected claims, requirements regarding residence, settlement, improvements, and the like had to be complied with on the new claim, with credit allowed for the time spent on the old claim. [41]

The clause was an invitation to fraud, allowing claimants to exchange valueless holdings for valuable land outside the reserve. It was condemned almost immediately. GLO Commissioner Binger Hermann wrote in 1901:

> Many representations made to this office in advocacy of the creation of certain reserves are prompted by the desires of interested parties in possession of valueless holdings which will become part of such reserves, thereby enabling such owners to exchange their valueless properties for valuable portions of the public domain, which under existing laws they cannot otherwise obtain. Many valueless lands belonging to the states, such as school lands and other grants, and large grants which insure to corporations which are found included within reserves are also permitted to be exchanged for large quantities of valuable lands upon the unreserved domain. Their valuable lands are not relinquished—they remain.

Both in 1901 and 1902 he recommended creating new reserves and adding to old ones only after the law was amended to "require lands selected to be of like character or equal value with the lands relinquished." His successor, W.A. Richards, acting with Secretary of the Interior Ethan Allen Hitchcock, took action to curb this activity by creating "temporary withdrawals" of projected reserves thereby preventing the speculator from making the exchange. The act was finally repealed March 3, 1905. [42]

THE OREGON LAND FRAUD CASES

Occasionally in the annals of conservation history there have been cases and controversies of a sensational nature which have had lasting effects. Examples of such affairs include the Hetch-Hetchy controversy in California, the various "states rights movements in the west," and the Teapot Dome scandal. One of the first of these episodes was the Oregon land frauds. These

frauds which involved the Lieu Land Act and public school lands resulted, in the words of one historian, in "the rather serious impairment of the reputations of a number of people occupying tolerably exalted positions of public trust." The scheme involved swapping with the government worthless lands in the reserves of Oregon and California for valuable timber lands in the unreserved public domain outside the reserve area. Title to land and advance information about the creation of forest reserves was obtained through a land ring which included many public officials. The story broke in 1902 and for a decade furnished newspapers like the *Oregonian* and the *Oregon Journal* with an abundance of sensational material. The result was that a number of people were driven from public life and others jailed; it led to the repeal of the Lieu Land provision in the Act of 1897; it led to the creation of a Public Lands Commission appointed by President Roosevelt to examine the question of how best to protect the nation's natural resources; and it contributed to the creation of the Forest Service. The main setting for the drama was in the Federal Courthouse in Portland, Oregon, where the trials took place. Its roots lay in various places—in the luxurious boardrooms of Minnesota lumber barons, in the ponderosa (yellow) pine forests of the Blue Mountains, and the pumice soil of the Deschutes drainage; in the coastal forests of the Siletz Indian Reservation, the redwood forests of northern California, and in the upland forests of the Willamette National Forest. Our narrative will be limited to the Willamette National Forest.

In 1900 the survey of T. 11 S., R. 7 E., Willamette Meridian, was officially approved. Stephen A. Douglas Puter, a Californian who became the self-styled "King of the Oregon Land Fraud Ring," decided that the area would be a good one on which to make bogus homestead claims. He operated in this and in other ventures with a number of partners, the most important being Horace G. McKinley, a speculator, and Frederick Kribs, a Minnesota lumberman. The area concerned was isolated and accessible only by trail. Therefore, the chances were minimal that there would be any field examination. Ten people were recruited to file on the 12 homesteads, two filing on two claims each. Only three of the ten used their own names. Although none of the claimants lived anywhere near their "homesteads," all signed affidavits to the effect that they had lived there prior to the creation of the reserve and had lived there continually; that they had built improvements such as barns, fences, and houses, and had cleared and cultivated the land. Value of their "improvements" they estimated at several hundred dollars for each claim. The requirements that affidavits and proofs had to be witnessed was met by having the conspirators serve as witnesses for each other.

Then the plot thickened. A resident of Detroit, J.A.W. Heidecke, informed Puter's partner, McKinley, that he knew none of the "homesteaders" had been near their claims and wanted money to keep his mouth shut about it. Puter gave him $50, the first of a large number of payments of "hush money" to keep quiet. Heidecke became further involved when Puter learned that a special agent for the General Land Office, C.E. Loomis, was planning to make a field examination of the claims. Puter paid Loomis $500 for going to examine the township immediately with a promise of an additional $500 when the patents were cleared. He then paid Heidecke $110 to "guide" Loomis on the trip. Heidecke took Loomis not to the claims but to an area already settled and led him around, sometimes viewing the same cabin from the front, back, and side on the pretense that they were three separate claims. Loomis turned in a favorable report.

Some months later, Salmon B. Ormsby, Superintendent of the Cascade Forest Reserve, received instructions to make an examination of the claims and to get affidavits from disinterested people. Puter offered Ormsby's son $500 if he could get Ormsby to make a prompt examination of the claims and issue a favorable report, and he also arranged for Heidecke to guide Ormsby in the same way he had guided Loomis. Puter got word that Ormsby had sent his reports to Washington and that they were favorable. However, he felt uncertain and decided to go to Washington himself to confer with U.S. Senator John H. Mitchell of Oregon. Mitchell introduced him to the Commissioner of the General Land Office, Binger Hermann, who told him that the reports on the claims had been favorable, but that it would be several months before final patent could be issued. A day or so later Hermann called Puter to say that he had received a report that all the claims were fraudulent and suggested that Puter go to Oregon to get more affidavits. Instead, Puter saw Senator Mitchell, passed to him $2,000 in bills, and asked him for his help. The next day Mitchell reported that he had fixed things up with Hermann. A day later, patents to the claims were issued. It seemed like a happy ending.

The 11-7 Affair, as it was called, was duplicated in several other Oregon areas. However, in a fraud involving the Deschutes pine lands, Puter and McKinley fell out, and Puter determined to turn informer. Indictments were made against Puter, McKinley, and a large number of their accomplices. The case was a long one. The Federal Grand Jury was in session from December 17, 1904, to April 8, 1905, and through parts of August and September, 1905. They brought in 26 indictments. The trials themselves resulted in the conviction of a large number of people, including Senator Mitchell, Congressman John Williamson, U.S. District Attorney Franklin P. Mays, and Puter himself, who spent his jail term writing a long and interesting account of the affair.

The above represents an abridgement of the story; to tell the whole tale would take a large book—and it has. [43]

GRAZING

Regulation of grazing in the national forests was settled in the Pacific Northwest earlier than in any other region (see Chapters I and II). The period from 1905 to 1933 was marked by generally harmonious relations between the forest administration and the grazers.

Several factors led to this harmonious relationship. Grazing policy was established early on the Santiam and Cascade National Forests based on examinations and decisions of F.V. Coville, Binger Hermann, and Gifford Pinchot. The Pinchot policies were strongly endorsed by the National Woolgrowers Association in their 1904 meeting held in Portland January 11-15. Included in their statement was "Whereas the investigations of the Department of Agriculture into questions of grazing has been marked by intelligence, fairness and a thorough understanding of business requirements..." [44] There was continuity in livestock ownership, especially among sheepmen. H.C. Rooper, one of the Oregon delegates to the association meeting, grazed sheep in what is now the Willamette National Forest from 1884 to 1945. [45] Many of the problems which arose in eastern Oregon, including conflict between local stockmen and tramp sheepmen, cattle and sheep owners' wars, and conflicts between grazers and homesteaders, did not arise in the Willamette. [46] A further factor was that the large livestock associations had little influence

on Oregon and Washington livestock owners. Their loyalty was primarily to the state and county livestock associations. The Forest Service, working as it did on the grass roots level, was able to settle local problems on local grounds. [47]

Forest Service grazing policy gave preference first to stockmen resident in the national forest; second, to stockmen with holdings in the forest but not themselves resident there; third, to stockmen living near the forest; and fourth, to stockmen living at some distance but with an equitable claim to range land based on prior use of the forest range. In the Cascade and Santiam National Forests, most of the users were of the third and fourth class. A few homesteaders along the Oregon Central Military Road and in the McKenzie Bridge area grazed stock but mainly on their own holdings. The vast majority of the stock coming into the forest for summer range came from central Oregon—Sisters, Bend, Madras, Shaniko, The Dalles, Prineville, and Dufur. Of 21 applications for grazing permits in the Cascade Forest Reserve in 1905 only one was from a stockman living in the forest, and of 18 applicants only one in 1906. [48]

The period 1905-1933 was marked by some administrative decisions of concern to the area. In 1906 grazing fees of so much per head were levied. From 1911-1933 a series of grazing reconnaissances were carried out to locate and evaluate available rangeland, and in the same period a series of scientific studies of the range and its uses were made. Other studies were made for predator control.

James Tertius Jardine played an important role in grazing research. From 1907 to 1910 Jardine was a special agent of the USDA Forest Service developing techniques for range reconnaissance, and in 1919 published the classic *Range Management in the National Forests.* His major studies were in the Wallowa National Forest where he developed standards of deferred grazing and rotation which became standard for the region. In 1911 Charles Flemming established an office of grazing studies in Region 6; he was succeeded by J.M. Peterson in 1913. Comparative studies were made of such matters as the use of specified bedgrounds for sheep versus open herding and bedding out. [49]

In the Willamette National Forest grazing reconnaissance was carried on by John C. Kuhns who issued a comprehensive report in 1916. [50] This was brought up to date in 1934. There was during this time some decline in the number of sheep grazed, from 40,810 in 1922, to 38,075 in 1932. There was also some decline in the range available. Lodgepole pine and alpine fir encroached on old burns and meadows in the high country. Lodgepole pine was encouraged by grazing since the hooves of sheep prepared a good seed bed. Sheep in the area came largely from central Oregon; some cattle and horses came from the west side. Grazing did not go above range capacity. There were few poisonous plants, and predators were not a great menace. The possibility of extending grazing to cutover land was considered. As far as watershed values were concerned, "recreational use inside the forest is more a source of pollution than grazing." There was need to study more carefully the effect of grazing on wildlife. [51]

The major use of the Cascade and Santiam National Forests was for sheep. There were relatively few cattle and horse owners who sought grazing permits. In addition most of the grazing regulations and administration related to sheep grazing rather than cattle and horse grazing. Horses and cattle are independent creatures which can be left to forage for themselves for long

periods of time without supervision. Also their grazing is farther from the grass roots than that of sheep, and consequently likely to be less injurious to the range. Sheep, by contrast, are helpless creatures with foolish and sometimes suicidal habits who require close supervision. They are more vulnerable to predators than horses or cattle.

Sheep herding changed little from the 1890s to the 1940s. After shearing and lambing on the home ranch in central Oregon, sheep in bands of 1,500 to 2,500 were driven to their summer range in the mountains. Each band was accompanied by a herder or two and a packer who tended the saddle and pack horses and sheep dog or two. The herders' equipment consisted of one or more tents, camping gear—kettles, frying pan and dutch oven, and a rifle—in early days the 44-40 Winchester model 1873, later the 30-30 Winchester model 1894 or the 300 Savage model 1899, and a .22 rifle to save an occasional blue grouse from dying of old age. They usually entered the mountain area in June and left in September, traveling by specified driveways. Theirs was a solitary life entailing a great deal of responsibility for valuable property, and was thoroughly enjoyed by those with a taste for such life. Herders and packers were of all nationalities and backgrounds. Some were Irish, while German, Spanish, and English names show up among them. The herders were generally welcomed by frontier settlers, rangers, and lookouts. Their visits offered a chance for gossip and pinochle, and visiting herders usually brought with them a haunch of mutton for the larder. [52]

The Forest Service administration consisted of allotting grazing permits to individual grazers who applied. Preference was given to grazers residing in the area and to those who had used to range in previous years. This was accompanied by discussion between the grazer and the Forest Service official on the area allotted, and its relationship to neighboring permittees. The permits established the number of and type of stock, and the area to be grazed. For example the range area allotted to Herbert C. Rooper in 1905 was described as:

> On the east by the McKenzie River and Clear Lake, on the north by Fish Lake and its main tributary streams, on the west by the section line one mile east of the township line dividing ranges 5 and 6 east; on the south by the township line between township 14 south, range 6 east, and township 15 south, range 6 east, with the addition of a certain old burn about one section in area, situated about two miles south of the southwest corner of the above described territory, and bounded on the south by an impassible canyon.

The permit also dealt with the time to enter and the time to leave the forest, the route to be followed by which the sheep would enter the forest and travel to their range, and the number of days to be spent in each camp. In the fall after the sheep had returned to the home ranch, the permittee would file a report for the Service including in it his satisfaction of dissatisfaction with the range, problems encountered, and the condition of the range. The range inspection included examination of how the herder had utilized available feed, condition of the range including areas of overgrazing and underutilization, locations of more feed, and best routes for trailing the sheep into the area. [53]

For their part the Forest Service located sheep driveways utilizing portions of existing roads and trails to reach the range. Here are some typical descriptions: Enter Cascade Forest via trail south of Maiden Creek. Follow old trail to Riggs Meadow; thence to Salt Creek Wagon Road to

Diamond Creek Way; thence following Diamond Creek Way to Dead Camp. Or "old Willamette Road, leaving it near Windigo Pass. Thence along crest of Cascades and Calapooya Divide." Driveways were often rerouted because of erosion or overgrazing, blowdowns which closed the established route, or pressure from recreationists. The Service built foot bridges across streams, often narrow ones permitting the sheep to cross only in single file so they could serve as counting points. Counting corrals were also built, usually on the border of the forest.

Herding had been in its early stages that of driving the sheep toward evening to a satisfactory bedding ground. Grazing reconnaissance studies indicated that "bedding out," that is letting the sheep bed where they liked and having the herder stay out with them, resulted in better feed utilization and helped the sheep leave the forest in good condition. Bedding out was adopted by the herders in the Cascade and the Santiam Forests beginning about 1916. [54]

The wagon road grant lands, especially those acquired by Booth-Kelly, presented some problems because of the checkerboard pattern of ownership. As one sheep owner wrote, "It is impossible out here in the open country to herd a band of sheep up to a section line and no further, and a great deal more so in the mountains, not to mention a forty or an eighty." There was occasional trespass by one herder on land allotted to another and occasional overgrazing in driveway areas. In general, however, grazing administration had no major problems. [55]

The maximum grazing occurred in 1909 and 1910 when, for the entire Santiam and Cascade National Forests, 44,600 sheep at two cents per head were grazed and 2,809 cattle at five cents per head per month. Issuance of permits decreased in subsequent years due in part to decrease of available range through reforestation and in part by a decline in the grazing industry. [56]

Grazing competed with other uses of the high country. Indians traveling through the country used forest trails—in fact many of them followed the routes of old Indian trails—and Indians utilized the mountain meadows to harvest huckleberries. There were some clashes between sheepmen and Indians over use of the meadows. The Service finally reserved certain meadows for huckleberry harvest and camping, and driveways were routed away from them. Increasing recreation in the high country also led to relocation of driveways. Portions of the historic sheep driveways followed the Skyline Trail and these driveways were relocated. Also regulations were made that no sheep be bedded down closer than three hundred yards from streams or lakes. [57] The sheep competed for forage with deer and elk, and in the summer range around Three Sisters a game refuge was later created with grazing and hunting forbidden.

WILDLIFE

Wildlife in the national forests represented one of the most widely utilized resources. Hunting for subsistence was and still is a tradition in rural communities. From Maine to Oregon rural dwellers—farmers, loggers, miners, and government employees—geared up at the beginning of hunting season to "get their deer." Trapping fur-bearing animals for pelts and predators for bounties was also a way of life in backwoods communities. Recreational hunting and fishing was universal and each year hunters and anglers flocked to the forests—their numbers gradually increasing after 1905 with the widespread building of trails and roads, and rapidly increasing after 1910 with the use of the automobile.

Wildlife as a matter of management involved a complex interaction between Federal agencies, the state, and individuals. The Forest Service managed the land within the national forests. The USDA Biological Survey carried on research on wildlife and did some predator control. The state administered and enforced the game laws. The Forest Service worked with the state in having its employees act as deputy game wardens. Individuals varied in their cooperation with the government agencies. Market hunters and poachers were at odds with both government and state agencies and often with members of the local communities. Local trappers and predator hunters often resented the presence of government men encroaching on their livelihood. In the Crater (now Rogue River) National Forest for example a government hunter named Hammersley suffered some indignities. As George Cecil wrote, "This office is rather reluctant about sending a hunter there again because it appears that someone who has not much use for the Forest Service killed Hammersley's horse and robbed his camp of all his supplies, etc." [58]

The role of the private sector was important as well as that of state and Federal governments. America is a nation of joiners and sportsmen's associations, some national like the Boone and Crockett Club, some statewide, and some regional, carried on a variety of activities. They put pressure on legislatures to adopt sound game laws; established state or private game refuges, and carried on educational programs; George Shiras III converted the poacher's tools, the set gun, and the spotlight, into devices for wildlife photography, and his articles in the *National Geographic* had a profound effect in encouraging hunting with cameras. The story is told elsewhere; but it is part of our study to deal with the relationship of these groups with local officers.

Some study of habitat management had begun by this time (1905-1933), but research was in its infancy and few universities offered programs in wildlife management. Basic ideas regarding wildlife conservation during this time involved first keeping down predators; studies of predator-prey relationships, like those carried on by Durward Allen and Aldo Leopold were still in the future. Second, wildlife refuges were established which would not only protect the game within the refuge but also supply game to adjoining regions. Third, overhunting was curbed by closed seasons and bag limits. Fourth, was restocking. Under Chief Forester Henry S. Graves a great deal of restocking was done; shipping of Roosevelt elk from the Olympic National Forest for example and receiving mountain goats from the Tongass National Forest in Alaska in exchange for shipping bighorn sheep from Montana to Colorado. State and private activities paralleled those of the Federal government. [59]

The Cascade and the Santiam National Forests had an abundance of fur-bearing animals and predators. Trappers worked during the winter season and logged or cut chittum bark during the spring and summer. The reminiscences of trapper Charles Anway are instructive. He recorded several year's take on the North Fork of the Willamette above Oakridge as follows:

	1915	*1918*	*1922*
Bobcat	20	10	27
Coyote	5	8	7
Mink	5	15	14
Raccoon	6	10	—
Skunk	30	—	26
Bear	—	3	2
Cougar	—	—	3
Wolf	—	—	2
Fisher	—	—	1

Bounties on coyotes were $2.50 each, cougar $30.00, wolves $32.50, bobcats $2.00, and bear $10.00; all this in addition to the value of the pelts. In 1924 he trapped ten wolves near Oakridge worth $32.50 each for bounty and $20.00 for pelts. He continued trapping until at least 1930. [59]

In regard to game animals and fish, forest officers were appointed as deputy state game wardens with authority to arrest for infraction of game laws. [60] So far as forest residents were concerned the power was exercised with discretion. Settlers did not serve wild meat out of season if a ranger dropped in for dinner; forest officers recognized that in hard times the settler would be tempted to do some poaching and did not snoop into woodsheds and outbuildings. They worked with the community and with sportsmen's associations to curb such practices as allowing stray dogs to run deer. Forestry practices such as regulated cutting, fire control, and plantations improved the big game habitat. Beginning in the 1920s the Forest Service, working with the USDA Biological Survey, took a game census every year. [61]

In regard to sport fisheries, the Forest Service worked with state and Federal hatcheries to restock streams and lakes not only with native fish but with exotics such as eastern brook trout and golden trout. Forest officers enforced the law, reported on violations such as dynamiting fishing sites or exceeding bag limits, and reported on the qualities of streams and lakes for fishing.

Forest officers varied as to their interest in wildlife and fish. Nelson Macduff, Supervisor of the Cascade from 1920 to 1930, wrote "Neither the supervisor nor rangers have time to fish: hence must rely on reports from fishermen who are notoriously unreliable." [62] So far as the rangers were concerned this would seem to represent wishful thinking on Macduff's part. C.C. Hall, Supervisor of the Santiam, and Ranger Roy Elliott were keenly interested in fish and wildlife. Hall was a charter member of the Santiam Fish and Game Association founded in 1919 in Albany and became its field secretary. The objective of the association was the propagation, protection, and conservation of fish and game in the Santiam and Calapooia watersheds. They obtained a lease for a clubhouse at Clear Lake; developed strong community relations with commercial clubs and the Kiwanis; and in general pursued an aggressive campaign of education and law enforcement. Each year they carried on stocking programs for streams and lakes, planting over 96,000 fry in 1921. [63]

In the high country as the Skyline Trail became popular the Forest Service stocked a great number of lakes between 1931 to 1933. Fish stocked included Dolly Varden, cutthroat, eastern brook, and golden trout. Some 70 lakes were restocked. A report of 1933 dealt with 138 lakes in the high country. Most had an abundant population of fish, but some were depleted. [64]

The annual reports gave an interesting picture of wildlife in the areas. In the Cascade, the antipiscatorial Macduff wanted to prohibit boat fishing on the McKenzie and Willamette Rivers and to close their larger tributaries to fishing. He reported that the Oregon State Game Commission was planting streams and lakes in the McKenzie River area using Forest Service packers to take the fry in. Fish had been planted annually since 1913, with the Oregon Fish Commission planting trout In Big, Hand, Husband, and Lost Lakes, as well as Pole Creek. From 1919 to 1921, fish were also planted in the Santiam River, West Pine Ridge Lake, and Hunts Lake; and in 1931 near Detroit and Cascadia.

Big game was holding its own and there was a large take of predators. The reports by Hall are more detailed. Hall reported on the migration of elk to their winter range and winter kill among game birds. He reported that due to trapping by the Biological Survey, predators were on the decline except for coyotes who had learned to avoid traps. Wild turkeys were planted near Detroit in 1929 but the stocking was not successful. He found violations of game laws on the decline and attributed this to the aggressiveness of the game clubs. He reported on liver fluke in deer and even on an appetite of deer for clothing. As one of his rangers Smith Taylor wrote, "It is very common for deer to chew up leather, but never before this summer has there been a case of deer chewing up clothing that we know about." [65]

From early times the Forest Service established game preserves in its national forests. There was a strong movement in 1908 to establish one on the Soda Fork on the South Santiam River. Tracy C. Becker, a Federal legal officer, recommended to Theodore Roosevelt that a reserve be established there not only because it was a beautiful area with good timber and watershed values, and an abundance of deer, elk and bear, but also because land grafters had their eyes on the area. Roosevelt forwarded the letter to Pinchot, who favored its creation, but the plan was dropped. [66] In 1915 Henry S. Graves, who was very much interested in wildlife conservation, made arrangements with William G. Hornaday, Director of the New York Zoological Park and a major figure in wildlife conservation, to work with the Forest Service in recommending wildlife refuges. [67]

No refuge was established within the Santiam or the Cascade National Forests until 1926. In that year the Salt Creek Game Refuge was established comprising 38,000 acres in a strip from two miles east of Oakridge to Salt Creek Falls, and from two to six sections wide covering both sides of the road and Southern Pacific Railroad. it was established because of a large influx of people into the area for railroad building and at the request of the local sportsmen's club to the Oregon State Game Commission. Macduff, on its creation, commented that some 10,000 acres of the refuge were used by sheep and cattle men who had been given no prior information by the game commission. In the late 1920s a game refuge was established near Three Sisters, largely at the request of recreationists who objected to random shooting. Perry A. Thompson, who succeeded Macduff as Supervisor, was critical of both refuges. The Salt Creek refuge was in a poor location and a better one would be the Hills Creek area or along the South Fork of the McKenzie. The one

at the Sisters was too high and did not include enough winter range. He felt that the proposed elk refuges on Portland Creek or Frissel Creek would be desirable. [68]

DEVELOPMENTS

The period 1905-1933 saw profound changes in the social environment of the national forests. Most of the forests in 1905 were frontier communities with few roads and a small but growing number of trails. Travel was on foot, on horseback, or by wagon on the few roads. Automobile travel was in its infancy. Automobiles reached Government Camp from Portland in 1903 and crossed the Cascades in 1905 over the Santiam Wagon Road, but such travel was adventurous and risky. Communication was slow; rangers in the field were on their own. They were out of touch with Supervisors or other officials for months at a time. "An automobile gets you there faster, but a horse, oftener" was an aphorism of the time. Road building was largely a local responsibility depending on county funds or community effort. [69] The telephone, radio, and automobile broke down isolation, converted frontier settlements into forest communities, and transformed both economic and recreational life.

The automobile brought about a demand for good roads. An important part of the road building was increased state and Federal aid and here a brief chronology would be in order. In 1907 roads and trails were built with county funds, some government appropriations, and some voluntary help from settlers. In the Cascade (North) NF in 1907, which then included most of the present Mt. Hood and and some of the present Willamette National Forests, there had been built since creation of the forest, 55 miles of county road and 180 miles of private road, as well as eight miles of railroad near Detroit. Twenty-six miles of private trail had been built and the government had built 300. In addition, 11-1/2 miles of private phone lines were in the forest. In the Cascade (South) NF, which included some of the present Willamette, Umpqua, and Deschutes National Forests, four miles of county and 24 miles of private and five miles of government road had been built since 1907. Two miles of narrow gauge railroad had been built; 42 miles of private trails, and 258 miles of government trails. Also, eight miles of telegraph lines had been built and 46 miles of private telephone line. [70]

The demand for roads in the national forests was implemented by legislation and here some of the major pieces of Federal legislation may be listed. Counties in which national forests were located had long complained about the loss of tax base for public schools and roads. Recognizing this, the Agriculture Appropriations Act of 1906 provided that ten percent of the gross receipts from national forests during any fiscal year be turned over to the state in which the forest was located for the benefit of public schools or roads in the counties in which the Federal forests were located. In 1908 this was raised to 25 percent. In 1912, the Agricultural Appropriations Act made ten percent of all receipts from national forests available for construction of roads and trails in the forests from which the receipts were derived. In this, cooperation with the states was authorized in furtherance of any system of highways in which such roads were a part. On July 11, 1916, an act was passed appropriating $10,000,000 over a ten-year period for construction of roads and trails partly or wholly within national forests. In 1919 the Post Office Appropriations Act gave $3,000,000 for each of the fiscal years 1919, 1920, and 1921 for cooperation with the states in construction and maintenance of roads and trails needed for the use and protection of resources or desirable for the proper administration, protection, and improvement of the national

forests. The Federal Highway Act of 1921 appropriated $4,400,000 for construction of forest development roads. [71] The period was one of transition from toll roads and private roads to state and county highways.

In the Cascade National Forest railroad construction also was important. The Oregon and Eastern Railroad Company, a subsidiary of the Southern Pacific, had projected a line between Eugene and Klamath Falls by way of Oakridge. Surveys were made, and in the period 1909-1911 the line was built as far as Salmon Creek just east of Oakridge. Construction was halted due partly to litigation and then the war. However, between 1923 and 1926 an all-out effort was made to complete the line across the forest and the divide. The influx of transient workers there was a major factor in the creation of the Salt Creek Game Refuge. The Ranger, C.B. McFarland, sent out cruisers to estimate the amount of timber on the right-of-way. He had a reputation for insisting on fair scale for all timber. On one occasion an axeman found a three-inch diameter pole across a survey line. "Shall we throw this in the river?" asked the axeman. "Hell, no," replied the construction engineer, "Let it lay so McFarland can scale it." [72]

The legislation between 1912 and 1921 led to a great impetus of road building. Between 1908 and 1919 the Forest Service built 466.10 miles of trail, a ferry to cross the North Fork of the Willamette, and 22.82 miles of road, and made grade improvement on existing roads. Costs were $34,855.68. Settlers contributed $600 of this providing $150 of the $250 cost of half a mile of road in the Cain Road area, and $450 of the $629 cost of the mile-long Dunning Road. The proprietor of McCredie Springs contributed $148.05 of the cost of improving the road between Oakridge and McCredie Springs. In addition a construction road for the railroad was built, partly by the county, which connected McCredie Springs to Odell Lake. From there transportation was possible from Odell to Crescent Lake and thence across the mountains. The county contributed $612.53 and settlers $329 of the $4,894 cost of a road between Oakridge and High Prairie; the county also contributed $1,313.50 to the cost of the Foley Springs Road, and $186.43 to the cost of the Oakridge-McCredie Springs project [73]

During this time both the state and the national government became interested in scenic highways. The initial cooperation between Oregon and the Forest Service came about in 1915 with the building of the Columbia River Highway and the Forest Service's dedication of over 14,000 acres bordering the highway for scenic and recreational use. [74] Other scenic highways were projected. In 1915 Robert S. Wallace, forest examiner, gave a detailed analysis of road needs in Lane County. He stressed both scenic and economic values of forest roads and their use in fire control. He recommended that first priority be given to making a forest highway of the Eugene-Prineville (McKenzie) wagon road going across McKenzie Pass and making a vital link between the coast and eastern Oregon. The Forest Service gave this high priority, and in 1919 planned to spend $355,000 on the 53.8 miles within the forest in fiscal years 1919-1921. Only the recreational roads just south of Mt. Hood had as high a priority. [75] To the north on the South Santiam River, the old Santiam toll road became a county road in 1898, and a state highway in 1925. (Final work to make this an integral part of the Oregon State highway system was completed in 1939.) [76]

Specifications for trails were laid out early by Supervisor Seitz at a ranger meeting on March 21, 1910. The Forest Supervisor should act as a general manager in determining the location of trails

and other improvements. The national forests should be considered as a whole, with the Cascade, Umpqua, Deschutes, and Mt. Hood having a network of connecting trails. There should be both central and branch trails with junctions of central trails not more than 20 miles apart. No grade should be over 10 percent. The trail should be 12 inches wide, the tread of a horse. Ranger stations should have a house, barn, and not less than 100 acres of pasture. [77]

Telephone lines also were built rapidly, particularly after the 1910 fires in the Northwest, when their value in fire control was strongly proven. [78] In the West Boundary-Oakridge area the lines were hung on the telegraph poles of the railroad company; elsewhere insulators were hung on trees or poles. The West Boundary personnel maintained the line by means of a three-wheeled hand powered velocipede to travel on the rails with tools and wire; it was afterward replaced by a gas speeder. The Forest Service maintained the line from Oakridge to Eugene until 1940 so the Supervisor had a direct link with the ranger stations. After 1940 the line was managed by the commercial telephone company. Settlers were connected with the Forest Service lines through what were known as farmer's lines. The Forest Service had a switchboard to connect parties or put through long distance calls for the settlers. The telephone system was valuable to the Service and to settlers alike. It broke down isolation and permitted quick action in case of persons being injured or lost. On the other hand, it enabled the Service to call for help in case of fires. [79]

The telephone wires were laid by hand, usually with pack mules carrying in the wire and insulators, and men wearing climbers putting up the insulators. There were many ingenious devices to lighten the load or labor. C.B. McFarland developed a device to permit the laying of the lines with horse power. A reel of wire was placed on a sled runner with plow handles on the aft end. A horse would pull the runner. By bearing down on the handles, the runner could be made to jump an 18-inch log. Maintenance of the line consisted of repairing breaks and pruning the limbs that might touch the wire. Some used firearms for breaking off limbs; use of a .38 revolver and a 30-06 with light hand loads are recorded. Usually however, axes, hatchets, or pruning saws were used. McFarland developed a limb hook consisting of a 14-inch file put into a round shovel shank and attached to a 14-foot pole. The file was given a sharp edge and could break off limbs nicely. [80]

There were experiments with other methods of communication. Heliographs had been used in the Apache wars of the Southwest to signal the movement of the enemy and there was some experimentation with them in the Northwest. They were based on two mirrors to reflect sunlight and a shutter which could be flipped to give a dot-dash Morse code. They were generally disliked; the sun would move and get out of focus or clouds would obscure the message. [81] Carrier pigeons were also utilized. Their use in the war had attracted attention and at least two pigeon cotes were established, one at West Boundary and the other at McKenzie Bridge. They were primarily for fire control work and Mrs. McFarland records receiving a pigeon message from her husband from an isolated fire. [82]

Trail, road, and telephone construction were accompanied by other developments which contributed to "taming a wild forest" and transformed a pioneer settlement area into a forest community. A convenient taxonomy for these activities is one that divides them into three categories: Facilities for state or Federal agencies; those designed for the Forest Service to carry out its management responsibilities; and those related to the private sector, largely for recreation.

State activities within the forest and activities involving other Federal agencies have already been mentioned. In fish management, state fish hatcheries were established on Forest Service land along some major streams. Ranger stations and lookouts established cooperative weather stations for recording data for the U.S. Weather Bureau, and Forest Service officials collected data on snowfall in the high mountains. In road construction, the Forest Service made available construction sites and borrow pits for building roads.

With this increasing activity, the Forest Service built up its own facilities in the form of ranger stations, guard stations, shelters, lookout stations, and campgrounds. One can determine two major periods of activity in these developments: One, from 1906-1911 based on what Jenks Cameron called "alarums and excursions," and the other on need.

The first period deserves some explanation: Researchers will find in the files a tremendous number of withdrawals for ranger stations and "administrative sites" 1906-1911. There were two reasons for this. One was the passage of the Forest Homestead Act, mentioned in an earlier section. Since the conditions needed for homesteads—level land, water, pasture—were also those needed for ranger stations there was some concerted effort on the part of the Forest Service to get in ahead of potential applicants for forest homesteads. A large number of forest homestead applications were denied because of the Forest Service's prior claim.

The second activity was politically motivated and originated in the Washington Office. It was related to hydroelectric power. Much of the potential water power in the United States was located in the national forests. Hydroelectric power is a natural monopoly, and there was at this time, a great deal of fear of a national hydroelectric monopoly. Studies by the Bureau of Corporations seemed to give credence to this belief. Statutes governing water power in the twentieth century authorized the Secretary of the Interior to permit the granting of public lands for the generation and distribution of electric power and establishing regulations for its use. Acts of 1898 and 1901 clarified this act. The Transfer Act of 1905 shifted jurisdiction to the Secretary of Agriculture. Pinchot feared water power rights would be abused, and between 1907 and 1909 called on the Service to set aside potential water power sites within the national forests as "administrative sites." These withdrawals continued until 1910 when Congress passed legislation authorizing the President to withdraw from sale or entry sites on the national forests valuable for water power.

The policy of the Forest Service under both Pinchot and Graves was that of allowing a water power site to be established on a lease basis, the lease to expire within a given time. The agency made a series of studies within the Santiam and the Cascade National Forests on the water power potential. In December 1910, the Service enabled permits to be granted by the District Forester for small, non-commercial installations. Commercial permits were to be granted by the Secretary of Agriculture; they were to run for 50 years and could be renewed. After 1920 the Federal Power Commission was established, and the Forest Service worked with the agency. [83] Meantime most of the "administrative sites" withdrawn for power purposes were cancelled.

Living and working conditions for the Forest Service staff underwent remarkable changes. The automobile replaced buckboards and saddle horses for travel on major roads. Telephones and radios broke down isolation, and electric lights began to replace kerosene lamps and Coleman

lanterns. Smith L Taylor, who worked in the McKenzie District from 1909 to 1932, wrote of these changes:

> After taking the Rangers examination in the spring of 1908, the man was sent as a Guard to McKenzie Bridge, which was about the center of about 500,000 acres of land that was all his to look after.
>
> It took two days of hard riding with saddle and pack horse from Eugene to the Station. Now one can go down over the same route in an hour in perfect safety.
>
> The [Paradise Ranger] Station consisted of a low log hut with a T, made out of 1x12, built across the end and the squirrels ran in and out of the cracks. A low squatty, log barn with the door you couldn't get anything through but a very small pony and there was only room for two small ponies and a thousand pounds of hay inside. The saddles were hung outside.
>
> The house had one cook stove, very small, and one heating stove and a table, homemade, and some benches to sit on. And a toilet with no door. Water was carried from the river up a 30 foot bank.
>
> This is being written in a modern office with a swivel chair, a glass topped desk, electric lights made by their own hydroelectric plant, a modern switch board, and a typewriter with someone to run it.
>
> Looking out of the window one can see a well-kept lawn with shrubbery along a concrete walk, and just beyond modern homes for the ranger and his assistants. And a spacious barn with a neat saddle room, concrete watering trough with an automatic feed.
>
> If this advance had been made by a private individual in any kind of business in the same length of time, one would say, "Well, sir, you have done well, yes, damned well!" [84]

RECREATION

In recreational development, Forest Service activity can be divided into two categories—one dealing with the high country, the peaks, passes, glaciers, and alpine meadows near the crest of the range, attractive to the hardy and accessible only by foot or horse—and the other with the lower elevations, more readily accessible by road.

Mountain climbing was an old Oregon recreation activity. Men like John Breckenridge Waldo, William Gladstone Steel, John Minto, Malcolm Moody, and a host of others spent their spare time in the high country, botanizing, fishing, hunting, photographing, and often carving their names on trees. The first western mountaineering club, the Oregon Alpine Club, was organized in 1887. Concerned over the fact that the membership rules were not tight enough, since many hikers and non-climbers had become members, the founders of the club organized a new one as a "climbing" club, and emphasizing its alpine character. "Mazama"—Chinook for mountain goat—was chosen as the club's name, with the motto *Nesika Klatawa Sahale* — We Climb High.

John D. Scott wrote entertainingly of the early days of the club:

> In the early days mountaineering was another breed of goats. Their clothing and gear were different. Parkas were something Arctic explorers used. Many climbers merely wore their old clothes; it wouldn't matter if they got dirty, torn, or soaking wet. Sleeping bags were expensive, so people improvised with two thick blankets and half a dozen big five inch safety pins.

Dehydrated foodstuffs were not available; mountain climbers relied on oatmeal, prunes, beans, ham, bacon, toast, canned soups, jams, fruits, milk, and coffee. These supplies were supplemented by huckleberries and fish. Climbing ropes were "75 or 100 feet of clothesline or rope of uncertain age and strength." Crampons and pitons were unheard of and the club had just four Swiss ice axes. Alpenstocks were homemade, manufactured by driving a large nail vertically into the end of an old hoe handle and then filing the head off. [85]

The Mazamas were extremely interested in the peaks now in the Willamette National Forest. In 1895 a Mazama, T.O. Hutchinson, climbed Mt. Jefferson with a party. They tried to exchange heliograph signals with parties on Mt. Hood but were unsuccessful. In 1897 a copper register box was carried to the crest of Mt. Jefferson. In 1900, Mazamas, after 25 miles of trail location through the wilderness from Detroit to Hunts Cove near Mt. Jefferson, reached the base of the mountain. In 1903 two groups hiked in 24 miles from the end of the McKenzie River Highway to Three Sisters. In 1907 a party climbed Mt. Jefferson, hiking this time some 40 miles from Breitenbush Hot Springs. 1910 saw more assaults on the Three Sisters and the first recorded climb of the North Sister. 1916 saw more climbing in the Sisters area; by this time extension of the unpaved McKenzie Highway permitted the party to get by road to within six miles of their base camp, near the site of the old Sunshine Shelter. In 1917 there was an assault on Mt. Jefferson this time from the Detroit area. A proposed extension of the Oregon Pacific Railroad to the west side of the mountain had petered out in 1890, but several miles of road bed had been graded and a Forest Service trail built, so that their base camp at Pamelia Lake was easily achieved.

During the 1920s other outdoor groups took an increased part in climbs. These groups included the Bend Skyliners, established about 1925, and the Eugene-based Obsidians, established about 1927. [86]

Forest Service relations with the mountaineering and hiking clubs were cordial. Forest Service personnel joined the organizations, helped to plan trips, and took part in climbs and festivities. Cabin sites were leased for field club headquarters. The clubs, in their turn, aided the Forest Service in many ways particularly giving aid in mountain rescue work, and serving as advisory groups for recreational planning.

During the period 1907-1915 Forest Service attention had been focused on the use of the high country for grazing and problems of reconciling grazing with recreation were few; solutions were arrived at early as a result of the Coville report. Increasingly between 1915 and 1930 there came about a stronger emphasis on using the high country for recreation; and by 1930 a general recognition within the Region that recreational use of the peaks, passes, glaciers, alpine

meadows, lakes and tarns should be dominant, with grazing a secondary use. This decision coincided with a falling off in the use of the alpine area for grazing, so a minimum of friction was created. The processes which brought this change about—it occurred in other Regions as well as in Region 6—were complex and historical scholarship on the subject is not entirely satisfactory. They involved national leadership of Chief Foresters Henry S. Graves and William B. Greeley, and of others within the Regional Offices and the Washington Office; men such as Robert Marshall, Aldo Leopold, Arthur Carhart, and Smith Riley who brought recreational planning to a high level with their recognition of the recreational use of wild lands. In Region 6, George Cecil, C.M. Granger, and C.J. Buck were leaders in the desire to develop wilderness management and to preserve amenity values; in the Santiam and Cascade National Forests, C.C. Hall and Smith Taylor took the lead. However, the most important individual in this work was Fred W. Cleator, who served with the title of forest examiner for 20 years, with regional responsibilities for the planning and development of recreational areas. Cleator's contributions were widespread, ranging from the rain forest of the Olympic National Forest and the alpine peaks of Goat Rocks to the rivers and mountain valleys of the Willamette and the Rogue River National Forests. [87]

Cleator's policies for the Region overall deserve scholarly attention. They are comparable with and equal in importance to the contributions made by Arthur Carhart in the Quetico-Superior area, and of Aldo Leopold in the Rocky Mountain Region. They were well adapted to the relaxed pattern of outdoor enjoyment typical of the Pacific Northwest from 1900 to 1945. As it will be seen, they were somewhat at odds with the recreational pattern which developed in the period after 1945.

The high Cascades were traversed by a network of trails, some of them made by Indians crossing from the east side of the mountains to the west; some built by pioneers or prospectors; some pioneered by early Forest Service men like Cyrus Bingham or Archie Knowles; and some of more recent construction. Both west and east of the crest of the Cascades a network of roads had been built south of Mt. Hood making the peaks of the middle Cascades more accessible. In 1919 the Forest Service began to consider plans to build a Forest Service trail from the Columbia River to Crater Lake and thence to the California border, in part using existing trails and in part, pioneering new ones. Similar plans were made for a connecting trail built across the river from the vicinity of Underwood, Washington, to the Canadian border.

Cleator made his first over-all examination of the Oregon area on a pack trip from Crater Lake to Minto Pass during the summer of 1920. He took a pack string of nine horses, E.R. Johnson, and engineer F.B. Lenzie, a grazing expert, and a cook. Communications with the Forest Service were by carrier pigeon. Cleator took with him a large number of trail markers and signs and the Oregon Skyline Trail was officially born. His recommendations included suggestions that Jefferson Meadows be closed to grazing and that some policy decisions be made on the use of all alpine meadows to reconcile grazing and recreational interests. There was need to relocate trails with steep gradients and to mark clearly and designate all camp sites.

Cleator's plans for the trail, some of which were put into effect with relief help during the 1930s, included building shelters about every ten miles in order to promote greater use of the trail. His idea was that hikers could break camp at shelter locations, walk ten miles to the next shelter,

have camp set up by mid-afternoon, enjoy themselves by fishing, berry picking, or picture taking during the remainder of the day, and then travel on to the next shelter. At intervals, at places like Marion and Pamelia Lakes, and Fish Lake, on or near roads, he planned to have larger campgrounds with more facilities so campers could rest from their foot travel, replenish supplies, and talk to other recreationists about their experiences.

This was an era in which scenic mountain highways were becoming popular. The Columbia River Highway and highways to Mount Rainier were the first in the Northwest. Cleator planned a Skyline Highway taking off from existing roads south of Mt. Hood and connecting with existing roads near Crater Lake. A series of surveys were made by the Forest Service with assistance from the Bureau of Public Roads. Cleator estimated that 99 percent of the road could be built with a grade of five percent or less with the rest on a gradient of not over six percent. The highway would run to the west of the Skyline Trail. The largest engineering problems would be to the northwest of Mt. Jefferson and northwest of North Sister. The project attracted a great deal of public attention in newspapers like the *Oregonian* but the hard times of the 1930s put an end to the project. [88]

As has been mentioned in Chapter I, the government began to protect areas of value for city watersheds and huckleberry patches in 1897. A number of huckleberry patches were afforded such protection particularly in the Rainier (now Mt. Baker-Snoqualmie) and Columbia (now Gifford Pinchot) National Forests, and in the Cascade and Santiam. As time went on, some managerial problems developed, this time mainly involving Indians rather than sheep.

Indians were among the main harvesters of huckleberries and had access to the patches by tradition and by treaty rights. However the privilege was subject to abuse. Indians traveled by horse and took with them an inordinate number of pack and saddle animals. Between 1908 and 1921 protests grew over the fact that the Indians got free grazing for their stock while stockmen had to pay a fee. The problem was most acute to the north in the Columbia National Forest where Indians rented grazing land on the Yakima Indian Reservation and drove all their saddle stock to the Columbia National Forest, and where a comic opera affair developed when Raymond Duncan (brother of Isadora, the dancer) carried on a vigorous campaign to protect the rights of the Indians to unlimited grazing. In the Santiam, C.C. Hall raised the question in 1922 over the influx of horses from the Warm Springs Reservation. From the Washington Office, C.H. Rachford from the grazing section, wrote back to say first that it was a matter for the Bureau of Indian Affairs, and second, no restrictions were placed on saddle and pack horses for other recreationists. The problem died a natural death, for as roads were built both Indians and whites relied on the automobile for transportation to the berry fields. [89]

In the late 1920s the Forest Service began to set aside primitive areas. Such areas were reserved as roadless areas with no residential construction, though grazing was not considered incompatible with their existence. Under these regulations in October 1930, 52,300 acres were set aside near Mt. Jefferson, and 47,500 acres around Diamond Peak. Acreage near the Three Sisters was added later. [90]

The period 1907-1915 was marked by major adaptations in Forest Service policy to meet changing public needs and demands in the recreational use of the forests. The automobile led to

development of roads; forest roads led to increased use of the forests by visitors, campers, anglers, and hunters. The effect of this on fish and game has already been noted. The Forest Service response to the changes and increased use of the forest involved building of campgrounds and other public facilities; preservation of roadside beauty; and leasing of land for resorts, group recreational facilities, and summer cabins.

In an early period when there were few visitors, the building of campgrounds had not been of great importance. Sheepherders and hunters and campers had favorite sites which they occupied year after year. Organized groups like the Mazamas kept their favorite camping places clean. With the increase of transient visitors however there came the need to establish campgrounds in specified areas. Sanitation became a problem. Many favorite camping grounds became, in the words of one official "an affront to common decency." In the Northwest the first posted Forest Service campground was established at Eagle Creek along the Columbia River Highway about 1916. Funds for improved campgrounds were not appropriated until 1923, though there is some evidence that other monies were diverted for this purpose. After 1923 the Forest Service began its program of building posted campgrounds.

Lease of sites for recreational use on public lands began in 1899 with the authorization of leases for hot springs. Special use permits for recreational purposes were made before 1915 but they were revocable, and this practice discouraged permitees from making permanent developments. In 1915 Congress authorized the Secretary of Agriculture to lease land for hotels, resorts, stores, summer homes, or other structures needed for public convenience or recreation. The size of the lease could not be over five acres nor the lease extend for more than thirty years.

A third development was protection of amenity values, that is, the attempt to make the forest a pleasant place to visit from a scenic point of view. This involved preservation of scenic strips along lakes and streams and roads, developed at an early stage by Gifford Pinchot as a private forester, and applied in Minnesota. It was probably first refined in the Rocky Mountain area in the years 1906-1915. As time went on unit planning was developed. Establishment of summer homes, campgrounds, and resorts had been in the past provided according to demand. The Service saw the need for planning areas as whole units—that is, a stretch of highway, a resort complex, or a summer home colony—to make it a harmonious whole. [91]

In regard to resorts, the years from about 1900 to 1940 were the heyday of summer resort hotels in the United States. It was an era when the pace of recreation was more leisured than it is today. Visitors would arrive at a summer hotel with their trunks, fishing gear, and hiking boots to stay for a week or a month at a time. The hotels, usually large frame structures with wide verandas, were noted for good cooking and pleasant living. Visitors hiked, picked huckleberries and fished; and to balance this, many resorts had croquet lawns or tennis courts for social games. The automobile made the resorts accessible but in the end, ruined them. People become interested in covering miles rather than in seeing the scenery and motels grew up to cater to transients. The summer hotel era has a common history, all the way from the resorts on Grand Island and Isle Royale, Michigan, to the popular resorts at Welches, Oregon. [92]

Hot and mineral springs were among the earliest places in Oregon in which summer resorts were established and made special problems for the Forest Service. In general, they had a common

history—establishment of the resort, a period of prosperity and growth, and a period of decline. But each resort had its own history.

Most of the hot springs resorts were established between 1870 and 1900, along main roads and trails before the foundation of the national forests. They were usually acquired by use of the Homestead Act. The early history of each of these resorts is of interest, but predates the history of the national forest. For our purposes we will examine the history of the resorts after the forests were created.

Breitenbush Hot Springs were a series of springs on the Breitenbush River. They were discovered in the 1840s and were frequently visited by travelers in the mountains. In 1887 Claud Mansfield, after whom Mansfield Creek is named, homesteaded a quarter section for Dr. J.L. Hill of Albany. This area included most of the springs. In 1913 a tract of land was leased to Mark Skiff of Salem to build a hotel. This area included one spring. Hill built a number of buildings, mostly of shakes, and Skiff built a number of cottages. There were other attempts to get the land. W.F. White in 1914 filed on a tract just to the west of Skiff's lease but his claim was rejected because of timber on his tract, the need of the land for a right-of-way for logging, and the need of the land for public use. F.W. Ross also made an attempt to get land to the west of the Skiff claim but it was rejected. The Forest Service by this time recognized the need to keep most of the land in public hands and to prevent the private preemption of water rights. In 1911, J.L. Hill and E. O'Harra filed on two mine claims, the Ironside and the El Dorado. Hill was the owner of the Breitenbush homestead. The Forest Service mineral examiner, Walter M. Stephens, found no mineral on the proposed claims, and little assessment work. Since the claims abutted on, and in part overlapped, the Ross and Skiff claims, he concluded that "It is apparent that the claims were located to control the only hot spring on public land and cause F.W. Ross and M. Skiff trouble." The claim was invalidated in 1913. Development in the Breitenbush area was slow until after 1920 because the only access was by trail. However, with the 1920s, roads were built and by the mid-twenties the resort was a favorite one, with a large recreational complex composed of a lodge, cottages, public camping sites, and summer homes. [93]

Foley Hot Springs and Belknap Springs in the McKenzie River Valley were located early. Both had the advantage of being accessible by road. Dr. Abram N. Foley discovered the springs in the 1850s. The area was squatted "homesteaded" in 1865 by a Mr. Alexander. He sold the site in 1870 to Peter Roney. Roney constructed a lodge, a bath house, and guest cabins. Whole families traveled to the lodge in the 1920s. Nearby, Belknap Springs was discovered in 1859 and taken up by Roland Simeon Belknap in 1870. They underwent several changes of hands and a post office was established there in 1874. Like Foley, it was a favored resort particularly among the University of Oregon staff. Terwilliger Hot Springs was discovered in the late 1800s by Hiram Terwilliger, who filed on and then abandoned a cinnabar claim on the site. Terwilliger Hot Springs, Inc., was formed in 1927 by a group of Oregonians from the Eugene area, and five-acre lots filed on with plans to develop a resort. The Forest Service approved a permit. However, the Federal Power Commission had plans for a reservoir and classified the area as a power site under the act of February 26, 1899. The hot springs lease was terminated in May 1930. Nearly 40 years later, however, the site became the scene of a controversy which will be dealt with in a later chapter. [94]

There are numerous hot springs in the Willamette Valley especially near the upper reaches of the Willamette River. Kitson Hot Springs was the earliest to be located. David Kitson homesteaded the area about three miles east of the Oregon Central Wagon Road and set up a resort. The site was much used by travelers going over the mountains and had been long used by Indians for taking baths and curing fish. [95]

There were a number of attempts to establish resorts on Salt Creek. One of these near Salt Creek Falls was given a lease in 1908, but then was taken over by the Forest Service as an administrative site. McCredie Springs was the only resort to be developed, and it had an interesting history.

In 1911 placer claims on the springs were filed by J.D. Hardin on the grounds that they were salt springs and could be taken up under the act of January 11, 1901, which opened salt springs or salt deposits to placer laws. The claims were contested. In 1913 Hardin applied for a 30-year lease to build a resort. There was a contest over the area since Frank C. Young had also applied for a lease there in 1910. In 1915, Forest Service Chief William B. Greeley offered a lease to Hardin but with the proviso that there be free public access to some of the springs. Hardin was slow in paying bills for his proposed development and in 1916 the lease was transferred to Judge Walter McCredie who became Hardin's partner. The place was given the name "Winino Mineral Spring." Between 1914 and 1916 some buildings were put up—a hotel housing 60 guests, several cottages, and the like, as well as a swimming tank. Development was slow initially; the permittees had thought that the Southern Pacific Railroad would be built promptly through the area, but until 1923 the only access was by a poor road. However, railroad construction began in 1923 and railroad camps made their headquarters at McCredie Springs. Ownership and leasees changed hands a number of times between 1930 and 1942. [96]

AMENITY VALUES

With the establishment of summer homes, resorts, clubhouses, and stores, the Forest Service developed plans for working the various projects into a harmonious whole. Development of guidelines originated from 1915-1932, with a series of meetings, conferences, and experiments, many of them carried on within a single region. The story of this development is an interesting one but beyond the scope of this study. It involved locating summer homes on lots large enough to ensure privacy, but small enough to permit convenience in laying water lines and the like, and secluded from the flow of traffic. Those lots located on streams or lakes were set back from the water's edge to permit fishing trails along the banks. Access to summer home colonies would be by a single road entering the main road at right angles for safety. Construction of homes, lodges, and stores would be, as far as possible, of rustic design to fit in with the environment. Plans for logging or other commercial activity should be worked out in cooperation with recreational planning.

In preserving the beauty of a summer home colony, resort area, or road, the natural appearance should be maintained. This involved concealing "undesirable, unnatural views" such as buildings, camps, borrow pits, machinery, and the like. The policy adopted was that of the roadside screen. Its development antedated the creation of the Forest Service. Pinchot had used roadside screens both in his work as a private forester and under the Morris Act in management

of forests in the Chippewa Indian Reservation of Minnesota. In its essentials, this involved leaving a strip of uncut timber 200 feet wide along the borders of forest roads and bordering streams or lakes in order to preserve a natural appearance. Borrow pits, camps, or buildings were to be concealed behind the strip. The intent was to present an appearance of natural beauty to visitors, unmarred by signs of man's encroachments. The system developed by 1915 was one applied in time to all national forests, and adopted by states and other Federal agencies. In general, it worked well until the 1940 when an increase in alpine roads and air travel, as well as high elevation logging, lessened the value of these measures.

The roadside screen idea had to be adapted to the various forest regions. On the east side of the Cascades where the ponderosa pine forests are open the 200-foot limit had to be widened. On the west side the problem was windthrow. Isolated large Douglas-fir trees tend to blow over, and so in some areas ten-acre reservations of old-growth were preserved as groups, the roadside strip was logged of individual old-growth fir, and the screen consisted of second growth fir and hemlock. Shrubbery was preserved on the roadside between the road and the trees. Diseased trees, snags, and leaners which might be hazardous were removed; spike tops and sound mature trees were preserved. If timber sales were planned, the unit plan was developed in advance of cutting. Trees were felled away from the right-of-way and logging roads entered the main road at right angles. [97]

As noted before, timber sale planning for areas took place with overall planning and direction from the Regional Office, and construction and local planning from the office of the Supervisor or Ranger. Region 6 was fortunate to have Frederick W. Cleator as recreational manager. Robert Marshall, head of recreation in the Washington Office, commented in 1938 that Cleator's work had put Region 6 ahead of all other Regions in recreational planning. [98]

During the period 1907-1933 there was a tremendous amount of recreational development. A large part of this involved the private sector of the economy, particularly in the areas where tourism was increasing and private land available. The hot springs resorts were only a few of the facilities developed. Lodges, dude ranches, and private cabins were developed particularly in the McKenzie Bridge area and near Blue River. These present an interesting bypath, but our concern here is with Federal planning.

In the Santiam, the first area considered for summer homes in 1917 was Pamelia Lake. The lake was a favorite fishing spot, and both Supervisor C.C. Hall and the Santiam Fish and Game Association were interested in its development. At that time the lake was accessible only by trail from Detroit, some 18 miles away. It was expected that the rail line to Detroit would be extended, and indeed, part of the proposed right-of-way had been cleared and graded. The blue print prepared for this site is typical of many proposed for lakeside summer homes embodying as it did large lots clustered in one area, together with a public campground. The lots adjoining one another averaged 66 feet by 132 feet. They were located on the north end of the lake with 50 feet between the lot boundaries and the lake shore to allow for high water and to allow anglers free access. Lots would be leased for 30 years at a cost of $10 per year for most of them, and $15 for two somewhat larger lots. Cabins would be built of local materials, from logs and shakes cut and prepared on the site. A public campground would be built near the lake outlets and a water system and privies installed. [99]

Marion Lake, like Pamelia Lake, was located off the road. F.W. Cleator and Supervisor Hall made plans for this area in 1925. Their planning reflected the view that a Cascade Crest (Skyline) Highway was to be built. One summer home permit, probably the first made in the Santiam, had already been issued and there was also a squatter's cabin on the site dating from 1913. Their elaborate plans called for the following: [100]

FACILITY	NUMBER	ACREAGE	LAKESHORE FRONTAGE
Resort sites	2	10, 20	450, 2700
Ranger Station	1	36	1200
Club Sites	2	7, 7	700, 850
Public Campgrounds	2	32,30	1250, 900
Municipal or Health Camp	1	17	500

In 1923 Fish Lake was also investigated by Cleator and Hall for recreation potential. It had about 3-3/4 miles of shore line, over half of which was on private land. Of the government frontage, about half was lava rock, unfit for recreation. The lake, as has been mentioned before, was accessible by the old Willamette Valley and Cascade Mountain Wagon Road. Cleator and Hall thought the lake would have tremendous possibilities for recreation when existing roads were improved, and when the proposed Skyline Highway was built. It would also in time be connected with the McKenzie River Highway. The Forest Service had a ranger station there which Supervisor Hall used as summer headquarters and had also built a small campground. Plans were made for extensive campgrounds, a resort and clubhouse sites, and for improving the ranger station. [101]

Other alpine lakes for which recreational planning was carried on during this era included Big Lake, Gold Lake, Linton Lake, and Lake Melakwa. Linton Lake was included in the Three Sisters Primitive Area and was not improved. All these lakes were near the Skyline Trail and later Lake Melakwa and Scott Lake became accessible by road. Standard minimal developments for these lakes included posted camping places, stone fireplaces, pit toilets, garbage pits, and sometimes Adirondack shelters. [102]

Breitenbush was one of the oldest recreation areas. Plans for a highway up the Breitenbush River from Detroit to Breitenbush Springs made it necessary to coordinate logging plans with scenic roads. In 1920 Fred Ames and Fred Cleator made such plans for the projected sale on Canyon Creek entering the Breitenbush area from the north about two miles above Detroit. Plans were made for a scenic strip between the highway and the river, of 100 to 250 feet in width, with a fringe on the south side toward the river. Three years later Cleator made more extensive studies on the lower Breitenbush to protect scenic values adjacent to the projected Humbug Creek sale. This involved maintaining a scenic strip between the railroad track and the river so logging trains would run behind a scenic corridor. At the springs themselves the major efforts were toward establishing public campgrounds and a water system. By 1929, in the springs area, 60 homesites were surveyed and 275 more planned in addition to sites for clubs and development of the hot springs. In 1930, on the upper Breitenbush, plans were made by Hall and Cleator which reflected the growing use of automobiles. Plans were made to build a road up the North Fork of the

Breitenbush to Olallie Lake to connect with the Mt. Hood Loop Road. This would unite the northern Santiam and the Mt. Hood National Forests into an integrated recreation complex. The South Fork of the Breitenbush would remain trail country to give access to Mt. Jefferson. Resort sites of up to 20 acres should be planned as well as having sites reserved for clubs and organizations. There was need for auto camps and summer home sites as well. [103]

On the upper McKenzie River area, from Belknap Springs to Clear Lake, the objectives were to keep the river banks free for anglers, leaving 50-75 feet between projected summer homes and the stream. Flexibility was desirable in locating residences with planning for isolated cabins as well as for colonies of summer homes. Clear Lake was to be designated as a scenic area, with trails and roads kept to the minimum needed for access. On the lower McKenzie there was a rapid increase in use. Deputy Supervisor H.E. Vincent in 1920 suggested the need for a large campground at McKenzie Bridge. F.W. Cleator reporting in 1928, stated that the McKenzie River area had been visited in 1925 by 40,300 people. Of these, 8,000 were resort or hotel guests; 1,300 campers; 3,900 picnickers; 100 summer home people on government land; and the rest transients. While there were many private homes in the area, and some large resorts, he recommended more campgrounds. He pointed out that the area was already heavily committed to recreation. Since heavy logging was some time in the future—40 to 50 years, Cleator estimated—recreational values would have become thoroughly entrenched and reconciling the two values would be difficult. On the McKenzie Highway from Lost Creek Ranch across the summit, it was felt that additional recreational sites should be offered. Lost Creek Ranch had a store, lodging, and served meals, but was considered an "inadequate and not particularly desirable resort." Plans for the area included public campgrounds and building shelters for road crews who would need protection from the weather in the winter months. An airstrip nearby was also thought desirable. [104]

When a section of the McKenzie Highway above Blue River was improved the aim was to leave as much shrubbery and good timber as possible, preserving all trees outside the slope stakes. Cleator prepared 500 tags "Do not cut this tree" as guides to the highway engineers, and large trees were preserved if possible. Scenic signs were prepared for tourist information and brush was cut along the highway for scenic outlooks. However, C.J. Buck, in a memorandum to Cleator, urged that the Forest Service go slow in making recreation plans for the South Fork of the McKenzie River. A road along the South Fork had already been built from Belknap Bridge to three miles south of Cougar Creek, near Terwilliger Hot Springs, and the route had been surveyed to connect with roads in the Oakridge area. Buck felt that a timber management plan to utilize the huge commercial resources of the area should take priority over recreation, and that for the time being recreational development should focus along the main McKenzie River. [105]

Studies were made in 1920 of the Salmon Creek delta and regulations regarding scenic values of roads were considered, and cooperation with the Bureau of Public Roads was assured. Preliminary plans were made by Ranger Harlane "Huck" C. Hiatt for a Willamette highway recreation unit from West Boundary to Oakridge by 1929. The plan was not implemented and was restudied in 1939. [106]

The years from 1915 to 1933 were a period of planning and some progress in developing improvements and planning for recreation. One effect of this was the change in the nature of the

local officers'—rangers and supervisors—work. At an earlier time the winter had been the dead season for local officials. With the need to maintain roads and telephone lines, to survey lots for summer homes, and to plan timber sales, the work on the forest became more of a year round affair. There developed more specialization; the "jack of all trades" employee was replaced by the specialist as new skills were needed. There came to be a change in seasonal personnel, too, as the forestry schools in the West began to produce graduates.

RESEARCH

Research was the oldest function of the Division of Forestry and the Bureau of Forestry, out of which grew the Forest Service. The Bureau used student assistants to study growth, reproduction, and cutting practices in western Oregon and Washington starting in 1898. Much of the field work referred to by George B. Sudworth when writing his classic *Forest Trees of the Pacific Slope* (1908) was carried on by the Bureau of Forestry. As it has been noted, the U.S. Geological Survey in its examination of the forest reserves at the turn of the century, collected data on forest cover and historic fires. Frederick Coville's classic study of grazing dealt with forest as well as grazing problems. The Forest Service, while created primarily to administer the forest, carried on the research function.

With decentralization of the Forest Service and the establishment of a District (Regional) organization, two research sections were set up in the Portland office. One was a forest products division under Joseph B. Knapp. This dealt essentially with wood technology, collecting and disseminating data on wood qualities, statistics, and technical notes. The other was a section on silvics, set up as a one man section under silviculture which was headed by Fred Ames. Silvics was headed by Thornton T. Munger, a Yale graduate who had also studied forestry in Germany. Munger's initial studies were on the encroachment of lodgepole on ponderosa pine sites in the Deschutes National Forest. However, in 1910-1911, he began studies on growth and yield in Douglas-fir. The aim here was not only to inform the Forest Service, but to provide information for private owners, to encourage conservative cutting practices, and the practice of forestry on private lands. Thus, the results of these and other studies were published not only in the Forest Service publications, but also presented at logging congresses, meetings of the "Concatenated Order of Hoo Hoo," and sessions of the Western Forestry and Conservation Association.

Munger, beginning in 1910, set up a series of Region-wide sample plots in second growth Douglas-fir, the first in a 50-year old stand near Oakridge. The stand was remeasured every five years until at least 1967. A number of plantations were set up by the section on planting, under the direction of Julius Kummel. Some were experimental plantations, set up between 1910 and 1914 "planned to test the adaptability of eastern hardwoods in various areas." These included a three-quarter-acre tract behind McKenzie Bridge Ranger Station, planted to black walnut, hickory, and red oak; a tract near West Boundary Ranger Station, planted to pig nut, hickory, and red oak; and several strips near Dead Mountain. A notation on the file reads "apparently all were failures." A number of large plantations were also set up, mainly in old burns. These included the Battle Ax tract on the border between the Mt. Hood and the Santiam National Forests in 1913-1915; Breitenbush, near the springs in 1915; Dead Mountain, 1915-1917; and Seven Mile Hill in the same period. Trees planted, with the aid of Oregon State College forestry students, were Douglas-fir and western white pine, with some tracts of noble fir. [107]

In 1912, an experiment station and nursery were set up in the Wind River Valley, Columbia (now the Gifford Pinchot) National Forest, which became the center for planting research. Research itself underwent administrative changes in 1915 when a separate branch of research was established in the Washington Office, under Earle H. Clapp. The objective was to put all research under a single administrative head, and to give research personnel and their work full recognition as a separate branch of the Forest Service with the same organizational status as that of management of the national forest system. Research staff reported to, and were responsible to, the Washington Office rather than the Regional one—a fact that led, at times, to friction. The Pacific Northwest Experiment Station was formally established in 1924 with Munger as the head.

As time went on, research was carried out in new areas. Some of this was done in connection with universities, such as forest taxation studies carried on in cooperation with the University of Washington forestry department. Research into fire behavior was extended into development of new equipment for fire research. These included development of a hazemeter, a fan psychrometer, and a fire danger rating board. Tests were made of yellow and dark glasses for lookouts to find the ones that would best show smoke and not be fatiguing to the eyes; and tests were made for the causes of smokers' fires, whether from the matches, cigarette butts, or discarded pipe heels, and in what kinds of material fires would most readily start. Studies to determine how far the wind would carry seed were made by means of flying seed containers on kites, tripping them with a line and measuring seed dissemination on snow-covered ground. The McNary-Woodruff Act of 1928 authorized a ten-year program of research, including a timber survey. In Region 6 this survey was begun in 1929.

Other research areas were established. Experimental forests, large areas set aside for research purposes, were set up in representative areas of the region. In the Willamette National Forest, the H.J. Andrews Experimental Forest, a 14,990-acre tract to the northeast of Blue River in the drainage of Lookout Creek, was established in 1948 to study old-growth Douglas-fir. Also a number of natural areas were set aside. These were small areas to protect vegetational types for research purposes. They were generally of less than 5,000 acres, since most of them were in lowland valleys where the value of timber did not warrant setting aside large areas. [108]

FIRE CONTROL

The major problem that plagued timberland owners, Federal, state, and private, was fire control. Between 1900 and 1933 the Pacific Northwest took the lead in this field. The story is a complex one, involving Federal legislation, notably the Weeks Act of 1911 and the Clarke-McNary Act of 1924, aimed at Federal and state cooperation for fire control. On the state level a series of acts were passed compelling private timberland owners to take action in the prevention and suppression of fire. Private industry cooperated with the state and Federal agencies in fire suppression and detection, and a major educational movement alerted the general public to the dangers of forest fires. [109]

These legislative, administrative, and voluntary activities were paralleled by a revolution in fire fighting equipment and new means of detecting fires. The role of the telephone in establishing communication has already been mentioned. By the mid-twenties, telephones were supplemented

by radio communication. Initially, rangers would climb mountains and look out to locate fires; then shelters were built on strategic high mountains and visited occasionally; then permanent structures replaced them. The lookouts were of a variety of types, ranging from cabins built of the materials on hand to the portable 12'x12' prefabricated "Alladins," to the lookout houses of the Region 5 type, 14'x14', with a "doghouse" (cupola) on top to house the firefinder. They were located to cover all sections of the forest. These were supplemented by road patrols, primarily to catch fires caused by smokers or campers; by posted guards in major recreational camps; and by air patrols. The Osborne firefinder was developed in 1917, after a great deal of experimentation. The Forest Service made a contract with Leopold & Voelpel, a Portland firm, to have the firefinders manufactured at a cost of $25 to $36 each. After extensive field trials they were accepted by the Forest Service as standard equipment in 1918. The science of photogrammetry, pioneered by Lage Wernstedt, was used to produce panoramic photographs taken from lookouts, and aerial photos were used to aid contour maps for determining the lay of the land and fuel types. For the person on the fire line, the Pulaski tool and backpack pump cans supplemented the crosscut saw, the axe, and the shovel. Portable pumps, the first one designed by Smith Bartrum, were developed during this period. [110]

The fire season in Oregon lasts from late June to October; by 1933, fire control activities had a standard plan and organization in each national forest. Each year a fire control plan was prepared by the District Ranger for his district, and approved by the Forest Supervisor. A completed fire control plan recognized three aspects of control. First was a program of prevention to reduce the number of human-caused fires. Most of these fires were caused by smokers or careless campers, and such prevention included the posting of notices, placing recreation guards at heavily used sites, and using the help of businessmen, residents, concessionaires, and school children in educating the public. Another aspect of this phase was the identifying of high hazard areas, such as unburned slash or snag patches.

Second was presuppression. This involved an inventory of personnel including regular Forest Service employees and their locations; the strength and location of short-term personnel; public officials, such as sheriffs and state fire wardens; and individual local cooperators and their skills (such as bull dozer operator, cook, packer, truck driver, clerk). It included also an inventory of equipment available, and a list of each man who might fill a key position—camp boss, cook, dispatcher—if a fire should get loose. Each District Ranger also had a set of maps, including one-half-inch base map of the forest, showing zones of hazard; disks on each map showed five-, seven-, and 15-mile visibility coverage; and other maps showing logical fire line locations, fire breaks, camp sites, and roads and trails.

Paralleling this was a fire organization in the Regional Office to help on large fires. This involved collecting and transporting men to assist, and a listing of those in each national forest who were particularly skilled in fighting large fires and who could serve as overhead. [111]

In those years, the basic fire suppression policy of the Forest Service was to dispatch sufficient force to extinguish any fire by ten o'clock in the morning following its discovery. This involved a speedy analysis of fire danger, and an estimate of the manpower and equipment needed. It involved night firefighting and work in the early morning, before the humidity declined. Higher initial costs in men and equipment were balanced by less acreage lost to fire. The system evolved

during the 1920s, in the direction of having specialized crews for firefighting. It became fully developed in the 1930s when the CCC and other relief organizations provided a readily available pool of manpower.

The work of firefighting fell, to a large degree, on the short-term personnel. Increasingly, as forestry schools were established in the west, college undergraduates in forestry supplemented local men in this job, usually working on trail and road crews when there were no fires to fight. These were the people who occupied the lookouts, carried on patrols, or worked trail, and when fire broke out, chased smokes and fought fires. Beginning in 1920 at Hemlock Ranger Station, Columbia National Forest, training schools were established for the short-term personnel. These schools lasted for a week to ten days and were carried on in each Ranger District There, the short-term personnel were given lectures on map reading, operation of the firefinder, fire detection, smoke chasing, firefighting techniques, photogrammetry, and radio and telephone use and maintenance. Then they practiced these skills in the field, under supervision. The general purpose and spirit of the schools was analogous to the old ranger examinations, mentioned before, as designed by F.E. Olmsted. The Ranger, the fire control chief, and the supervisor generally ran the show, and often some of the "brass" from the Regional Office attended. This in-service training was carried on after the employee was on the job. Regularly, early in the season, a smoke bomb would be set off and a smudge fire set to test the alertness of the lookout. [112]

The value of this planning and training is dramatically described in an account by Supervisor P.A. Thompson. The Oakridge area was hard hit, August 10-14, 1930, by a series of lightening storms which set 50 fires. Ranger C.B. McFarland and his dispatcher, Foster Steele, had done the advance planning for emergencies of this type. The planning included communications, equipment, cooperators, transportation, and pack stock. Trained men, some Forest Service men, and some local cooperators, got to the fires early and kept them small. Only one fire reached the size of 15 acres; most were less than an acre in extent. [113]

Private cooperation with the Forest Service began at an early period. Fires are no respecters of boundaries, and are a danger to both Federal and private timber where tracts adjoin. The Western Forestry and Conservation Association promoted such cooperation, and it was financed by passage of the Weeks Act, which provided money to states for fire control on a dollar-matching basis. The State of Oregon, in turn, gave some of the money to fire control agencies established on a county level. The Linn County Fire Control Association was organized shortly after the passage of the Weeks Act in December, 1911. By 1913 it had established four main lookouts, some of them, like High Deck, in areas adjoining the Willamette National Forest. They had eight patrolmen in the Santiam area, and ten in the Sweet Home area. A patrolman driving a speeder (a small motorized, railroad wheel mounted vehicle) followed trains on the Corvallis and Eastern Railroad, searching for fires caused by wheel/track friction. By 1914 the system was expanded to eight lookouts, one manned by Porter Brothers. As in the Forest Service, there was a shift to trucks and automobiles in 1918 and 1919, and by 1924 portable pumps were used. [114]

Railroads, also, developed cooperative agreements for fighting fire on or near the railroad right-of-way. At Oakridge the Southern Pacific Railroad kept three tank cars with pumps, hose, and fire caches available for use either by its employees or by the Forest Service. Tool caches were located in all section houses. The railroad maintained three one-man motor car patrols, three

patrols by velocipede, and four foot patrols during the fire season. In addition the railroad's overhead personnel in Eugene and Oakridge attended the Forest Service's fire school. [115]

Timber sales had provisions regarding fire precautions. In 1906 Fred Ames noted that the first timber sale in the District, for two million board feet, was two pages long, with two lines concerning fire precaution and slash disposal. By 1928 the lines relating to these matters covered many pages. In 1908 regulations were made regarding the use of oil rather than wood as fuel during the fire season. Spark arresters were required and track walkers checked for fire when logging railroads were used. In 1909 regulations were lengthened to include snag falling and the keeping of fire hoses at the donkey. In 1910 regulations were extended to keeping on hand steam pumps and hose, having watchmen day and night, and donkey setting cleared for 50 feet. By 1932 sales regulations routinely included keeping fire fighting equipment on hand, snag falling, slash burning, and closure or hoot-owl shifts in times of high hazard. [116]

Aircraft were used for fire control beginning in 1920. Various foresters and forestry groups, including Forester Henry S. Graves, William T. Cox of Minnesota, Coert duBois of California, and the Western Forestry and Conservation Association recommended that the airplane be used in fire control as well as in mapping. In 1919 the idea bore fruit. Harold H. Arnold, District Supervisor of the Western Division of the Air Service (U.S. Army Air Corps), decided that fire patrol could be coupled with the training of pilots. The first flights took place in California. However, the Western Forestry and Conservation Association, the Governors of Oregon and Washington, Senator Charles McNary of Oregon, and Chief Forester Graves asked that the program be extended in Washington and Oregon. Staff of the Forest Service from Districts 1, 5, and 6, and the state foresters of Washington, Oregon, and California, met in April, 1920, with Army Air Corps officials in San Francisco. Flight routes were plotted, and locations of lookouts, guard stations, and emergency landing fields mapped out. Forest Service men were trained to work in liaison with the pilots. In May, 1920, an initial appropriation of $50,000 was approved for a joint patrol in California and southern Oregon, to begin on July 1.

The cooperative agreement lasted until 1922, when the program was terminated because of a reduced budget for the peace-time military forces. During this time, however, the Forest Service was given training in aerial observation and had data on which to gauge the value of planes in fire detection. The way was set up for experiments in radio communication. Increasingly, the Forest Service and lumber companies chartered civilian planes for observation, and the stage was set for increased use of planes in the decade ahead.

The Army Air Corps played a part in a short-lived experiment in using carrier pigeons for communication. In 1919 the Western Air Department was ordered to dispose of all its carrier pigeons. The Forest Service took 25 pigeons to Eugene for breeding purposes, and pigeon cotes were established at the West Boundary and McKenzie Bridge Ranger Stations. Other pigeons were sent to the Deschutes National Forest where they were used with success in the Portland Creek fire. As has been previously mentioned, Fred Cleator used them for communication while making his Skyline Trail reconnaissance in 1920. Franklin D. Roosevelt, then Assistant Secretary of the Navy, suggested that with the phasing out of air patrols, pigeons might be useful for communication. However, District 6 found them more trouble for upkeep than their benefits

were worth, and the pigeon project was phased out in 1922, though it was continued beyond that period in California [117]

TIMBER SALES

Logging practices of the period 1901-1933 were largely those of an earlier period. For transporting logs these involved river drives and the use of railroads for large operations. Use of trucks, tractors, and road transportation did not begin until the late 1920s. Animal power was widely used for small operations; donkey engines for large ones. Logging was largely carried on in the lowland areas and in stream valleys, although the Shay and Lima geared locomotives made some upland areas accessible. Clearcutting (removal of the entire standing crop) was the common practice in the westside forests. Early studies by E.T. Allen and Thornton T. Munger showed this to be the best system, from a silvicultural point of view, for regeneration of Douglas-fir. It was ideal from the standpoint of railroad logging since a line could be built into an area, the timber harvested, and the tracks taken up and moved to another area It also simplified the task of slash disposal. Fire prevention, slash disposal, and the elimination of waste caused by high stumps and merchantable wood left in the woods were the main concerns of the Forest Service. [118]

There were relatively few large sales in the Santiam and the Cascade National Forests during most of this period, until 1924. For that matter, there were relatively few during the 1930s; the depression, and a weak lumber market prevented many large sales from developing. Until 1933, there was still an abundance of privately owned timber land available near the borders of the national forests, and in enclaves within the forests. Second, transportation was limited. The majority of sales were small ones made by rangers for local industries, specialities such as chittum bark, and a few specialty sales of incense cedar for pencil stock, and sales to settlers or small mills for fence posts or building material. Only in the Detroit and Oakridge areas, which had rail transportation, were there sales of any size. [119]

Forest Service sales involved an estimate of the volume of timber in a given sales area, based on cruise. Sales documents were lengthy ones. They included a legal description of the sales area, usually using the customary township, range, section, and section subdivision; but sometimes using metes and bounds, such as ridge tops and stream beds, and sometimes a combination of both methods. Provisions were made to ensure low stumps—usually 24 inches as maximum height, and utilization of tops, calling for cutting to a ten-inch top. Scaling was done either in the woods or at the mill. Slash disposal and fire protection were included in the sales contract; prices were usually set by competitive bidding. This is a general description; as it will be told later, sales provisions became gradually more elaborate as time went on. [120]

Railroad logging in the Detroit area antedated creation of the national forest. The Hammond Lumber Company, by questionable use of the Homestead and the Timber and Stone Acts, had acquired a sizeable holding both within the Santiam National Forest and just outside its boundaries. Other lumber companies, including the Hoover Lumber Company and the Curtis Lumber Company, had also acquired lands. The Corvallis and Eastern Railroad—later acquired by the Southern Pacific— built a rail line to Hoover and Idanha, just to the east of Detroit, and

had graded a roadbed some distance beyond. Some small sales were made to these companies before 1916, at which time the Hoover Company, with its mill at Idanha, closed operations.

William B. Osborne, Jr., of the Regional Office, made a reconnaissance of the Detroit area in 1910. He found 20 townships with large timber values, much of it in old-growth Douglas-fir which was deteriorating. The Breitenbush River offered a good route to tap this timber. River drives would be possible through the use of splash dams and sluices, and a logging railroad could be built up the Breitenbush, branching off the main line at the junction of the Breitenbush and Santiam Rivers. In the future, Osborne judged, private owners would turn increasingly to government timber as private holdings became depleted.

Beginning in 1924, a series of large sales were made in the area on tributaries to the Breitenbush near its junction with the Santiam. The largest one was on Humbug Creek, calling for 77,500,000 board feet. This was a railroad logging show. As it has been noted, steps were taken to preserve scenic beauty for travelers along the road then being built to Breitenbush Springs. [121]

Increased activity near Oakridge came about in the mid-twenties. Some early sales had been made in the Lowell and the Oakridge areas, using a river drive to get out the logs. [122] The prospective building of the Southern Pacific Railroad from Oakridge to Klamath Falls caused a flurry of excitement in 1915 when the Forest Service prepared large sales in the Winberry and the Salt Creek areas. However, these sales did not materialize because the railroad postponed its construction. The commencement of construction some eight years later from Oakridge to Klamath Falls, however, caused new interest in the area. In 1923, B.F. Hoffman prepared a sales prospectus for timber on 13,300 acres on the North Fork of the Willamette River, an area with natural boundaries; the river bounded the sale to the west, prairies and old burns to the east. The area was benchland, accessible by a spur line from the main Southern Pacific line at Westfir and contained a solid block of old-growth Douglas-fir. The sale was made to the Westfir Lumber Company of Oakridge. It was the largest sale to that date, in the Douglas-fir area, for 685,000,000-board feet of timber, 90 percent Douglas-fir, the remainder hemlock, white pine, red cedar, and piling. The timber was to be cut at the rate of 50,000,000 feet per year. About a year later another large sale was made, this time to the Booth-Kelly interests nearby on Salmon Creek. The railroad had brought the Oakridge lumber industry to life. A company mill town, Westfir, was established. [123]

NOTES—CHAPTER III

1 Dana, *Forest and Range Policy,* 142-144 gives a good account.

2 Pinchot, *Breaking New Ground,* 261-262.

3 Dana, *Forest and Range Policy,* 151.

4 Charles McKinley, *Uncle Sam in the Pacific Northwest: Federal Management of Natural Resources in the Columbia River Valley* (Berkeley, 1952), 318-319, gives a good picture of regional administration.

5 Rakestraw, *Forest Conservation,* 214-225; Shirley W. Allen, "E.T. Allen," *Journal of Forestry,* 23:3 (March, 1945), 222-223.

6 *Biographical Record of the Graduates and Former Students at the Yale Forest School* (New Haven, 1913), 36.

7 Alwin Schenck (ed.) *The Biltmore Immortals* (Darmstadt, Germany, 1953), 71-75; Walter I. Hutchinson, "We Present: George H. Cecil," *Journal of Forestry,* 46:5 (May, 1948), 362-363.

8 *The Ranger,* 1:360 (1925), 1-2.

9 *Biographical Record,* 96-97.

10 Thornton T. Munger, *Forest Research in the Northwest; an Interview Conducted by Amelia F. Fry* (Berkeley, 1967); Munger, "Recollections of my Thirty-Eight Years in the Forest Service 1908-1946," *Timberlines,* Supplement to 16 (December, 1962), 1-30.

11 Rakestraw, *Forest Conservation,* 230-236; Leon Kneipp, "The Technical Forester in National Forest Administration," *Journal of Forestry* 16:2 (February, 1918), 155-166.

12 Data from maps, and files on separate ranger districts, WNF/H.

13 *Timberlines,* 10 (August, 1962), 77; C.P. Cronk, "The Siuslaw National Forest in 1910 as I Remember It," *Timberlines,* 19 (1967), 62-69.

14 Interview by Margorie Sansone with Harold Engles, March 9, 1979, WNF/H. Somewhat uncomplimentary evaluation of Macduff is found in Margie Young Knowles, *Honeymoon on Horseback* (New York, 1970), 88-89. Most local residents consider his shooting to be a suicide. See 1979 interviews by Gerald Williams of Martha Belknap, Manena Schwering, James Drury, and Cliff Lewis, WNF/H.

15 *Timberlines,* 19 (June, 1967), 101-104; Roy Elliott, "A Biographical Sketch of C.C. Hall" (n.d.), WNF/H.

16 *Eugene Register-Guard,* August 5, 1957.

17 Bill Parke, "Supervisor Perry Thompson" (Mss., n.d.), WNF/H.

18 Cyrus Bingham file, WNF/H; Bingham papers, University of Oregon Special Collections; Margie Young Knowles, *Honeymoon on Horseback* (New York, 1970).

19 Citation in *The Ranger,* 1:3 (April, 1929), 44.

20 C.J. Buck, "Land Problems," *Journal of Forestry,* 16:11 (November, 1918), 807-813.

21 T.M. Talbot, *Land Classification of the Cascade National Forest,* August 11, 1916; and Arthur E. Wilcox, *Land Classification of the Santiam National Forest,* August 13, 1916, gives details of annexations. Research Compilation File, Region 6, RG 95, N.A., contains reports by E.A. Braniff and W.H.B. Kent on the basis of which the withdrawals were made.

22 Dana, *Forest and Range Policy,* 14-15, 384-385.

23 Paul W. Gates, *History of Public Land Law Development* (Washington, 1968), 459-490, 493. *Decisions of the Department of the Interior* Vol. 33, 10-13.

24 Box 40891, WNF/H.

25 Charles H. Callison, "Mining Claims in National Parks and Forests," in Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History* (New York, 1983), Vol. II, 431-432; Marion Clawson and Burnell Held, *The Federal Lands* (Baltimore, 1957), 79-80, 225-228.

26 Blue River Historical File, WNF/H.

27 Breitenbush File, WNF/H.

28 Amalgamated Mining Company file, WNF/H; Detroit Historical File.

29 T.M. Talbot, *Land Classification of the Cascade National Forest* and Arthur E. Wilcox, *Land Classification of the Santiam National Forest,* give acreages and areas. See also Charles A. Sprague, "Willamette Highway—the Seventh Across the High Cascades," *Oregon Historical Quarterly,* 41:3 (September, 1940), 243-249, and Stephen Dow Beckham, *The Oregon Central Military Wagon Road: A History and Reconnaissance,* Heritage Research Associates, Report 6, Vol. 1 (1981).

30 C.J. Buck to Forest Supervisor, March 3, 1913; U.S. v. E.J. Collinshaw, W.J. Morrison, and the Sligh Furniture Company, #3866, District Court for the District of Oregon, January 13, 1913. Box 40892, WNF/H.

31 Dana, *Forest and Range Policy,* 406.

32 H.D. Langille, a former Forest Service employee, wrote eloquently: "[The offer] is made that I may escape the persecutions of the tax gatherers of Linn County, who, over the period of private ownership, have collected in taxes much the greater part of the realization." H.D.L to Supervisor, October 31, 1939. Voluminous files on land exchange are found in boxes 40889, 40890, and 40891, WNF/H.

33 Addie Morris, Homestead Settlement Records, WNF/H.

34 Talbot, *Land Classification of the Cascade National Forest;* Wilcox, *Land Classification of the Santiam National Forest.* See also Alford L Thayer, "The Fraudulent Homesteader," *Conservation,* 14:11 (November, 1908), 579-584.

35 Boxes 40891, 40892, 40893, 40894, and 40895, WNF/H contain many examples of squatter claim investigation.

36 Dana, *Forest and Range Policy,* 147-148, 392. George W. Woodruff, "Agricultural Settlement in the Forest Reserves," *Forestry and Irrigation,* 12:6 (June, 1906), 267-270.

37 Rakestraw, *Forest Conservation,* 259-260.

38 Boxes 40891, 40892, 40893, 40894, and 40895, WNF/H have numerous records of examinations. In June 11th claim work, the General Land Office commissioner would not approve claims until they were reported on by the Forest Service. Hundreds of applications were made, but in the Cascade National Forest only 44 claims totalling 3,941.87 acres passed to patent.

39 Dana, *Forest and Range Policy,* 148-149, 396; Talbot, *Land Classification of the Cascade National Forest;* Wilcox, *Land Classification of the Santiam National Forest.*

40 Lectures delivered at the University of Washington by Clarence John Buck. Feb. 1910, Forest Service Pacific Northwest Region Warehouse, Portland.

41 Dana, *Forest and Range Policy,* 108-109.

42 Dana, *Forest and Range Policy,* 113-114.

43 Dana, *Forest and Range Policy,* 126-130. Boxes 40891, 40892, 40893, 40894, and 40895, WNF/H contain interesting material that supplements the standard accounts. Stephen A. Douglas Puter, in collaboration with Horace Stevens, *Looters of the Public Domain* (Portland, 1908), is a fascinating account of the land ring's operations.

44 *Forestry and Irrigation,* 10:2 (February, 1904), 51-53.

45 Rooper File, WNF/H, Grazing; T.H. Sherrard, "The Days of Musk and Insolence," *The Ranger,* 6:3 (April, 1929), 9. T.H. Sherrard wrote, "It is an interesting commentary on the stock business that the sheep permittees are still largely the same persons and families while the old cattle permittees' names have largely disappeared."

46 Rakestraw, *Forest Conservation,* 195-208.

47 McKinley, *Uncle Sam,* p. 264, 266; Rakestraw, *Forest Conservation,* 238.

48 D.D. Bronson, Forest Inspector to H.W. Rooper, April 1, 1906, WNF/H Grazing File.

49 W.R. Chapline, "First 10 Years of the Office of Grazing Studies," *Rangelands,* 2:6 (December, 1908), 223-227; Rodgers, *Fernow,* 408.

50 John C. Kuhns diaries, 1915-1916, Portland F.S. Warehouse.

51 Grazing Forest Plan, Willamette National Forest (n.d., ca 1934) Oakridge Ranger Station Historical File.

52 Gilfillan, *Sheep* gives the best account of the herders daily round; Davis, *Kettle of Fire,* has some good personal reminiscences.

53 WNF/H, Grazing Permit Files.

54 *Ibid.;* Grazing Forest Plan, Oakridge.

55 H.W. Rooper correspondence, esp. May 11, 1906, WNF/H.

56 Blue River File, WNF/H, Grazing. In 1939 C.B. McFarland reported 385 cattle and 24,651 sheep.

57 Blue River File, Sweet Home, WNF/H.

58 U.S.F.S. Grazing-Supervision-R6 1908-1921, box 238, RG 95, National Archives.

59 Overall surveys include James Trefethen, *An American Crusade for Wildlife* (New York, 1975), and John F. Reiger, *American Sportsmen and the Origins of Conservation* (New York, 1975). A survey of Forest Service work is found in Mary Elizabeth Johnson, "Wildlife Conservation," in Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History* (New York and London, 1983), Vol. II, 702-709.

60 Charles Anway, "Life of Charles Anway," *Lane County Historian,* 26:7 (Fall, 1981), 51-59.

61 An early cooperative agreement was made in 1916, a later one in 1922. They provide that forest officers would serve as deputy state game wardens, and that the game wardens cooperate with the Service in case of fire. Arrest would be by the warden, if a warden was present; if not, by the forest officer. George Cecil to Forest Officers, Sept. 23, 1922, WNF/H, Wildlife file; *Six-Twenty Six,* 6:4 (April, 1922), 13. Blue River Historical File, and Wildlife File, WNF/H.

62 Annual Report, Wildlife, Cascade National Forest 1926, Wildlife file, WNF/H. This extraordinary statement is repeated in the 1926 report.

63 Helen M. Meyers, "History of the Santiam Fish and Game Association," (n.d.) Wildlife File, WNF/H; *Six-Twenty Six,* 5:2 (February, 1921), 13 and 8:9 (1924), 15.

64 L.H. Smith, "Lake Data," ca. 1934, Wildlife File, WNF/H.

65 Fish and Game Annual Reports, Cascade National Forest, 1925, 1926; Fish and Game Reports, Santiam National Forest, 1924, 1925, 1929, 1930, 1931; C.C. Hall, "A Working Plan for the Game Resources, 1926"; S.L Taylor, Fish and Game Report, Supp. Report, October 21, 1932, all in Wildlife File, WNF/H. Also, Glen Johnson's "Stocking Cascade Mountain Lakes," *The Oregon Sportsman,* 2:8 (August, 1914), 11-15 and 2:9 (September, 1914), 14-20.

66 Pinchot Records, RG 95, National Archives.

67 H.S. Graves to District Forester, July 3, 1915; District Forester to Forester, July 8, 1915, in F.S. Wildlife Corr. 1915-1936, Region 5, Region 6, Box 23, RG 95, National Archives.

68 Annual Report on Wildlife, Cascade National Forest, 1926, 1932, Wildlife File, WNF/H.

69 On early automobile travel, see Ivan M. Wooley, *Off to Mount Hood* (Portland, 1959), which deals with early travel from Portland to Government Camp, and A.L Westgard, "Transcontinental Automobile Trips," *The Pacific Monthly,* 17:3 (March, 1907), 347-355. Another good account is Stewart Edward White, *Speaking for Myself* (New York, 1943), 196-222. Dwight B. Huss and Milford Wigle drove the first automobile westward across the Cascades in the early summer of 1905 in an eight horsepower, one cylinder, 1904 Oldsmobile named "Old Scout." They were in a race against Percy F. Megargel and Barton Stanchfield, driving a similar car named "Old Steady," from New York City to Portland, Oregon, for the opening of the Lewis and Clark Exposition. The two teams were the fifth and sixth cars to cross thecontinent. Old Scout took 44 days, while Old Steady took 51 days, to make the arduous journey. Huss later recounted that when they reached the summit of Sand Mountain, they cut down a good sized fir tree and chained it to the rear axle. With Wigle riding the drag "brake," they made it down the wagon road "without difficulty or danger." Dwight B. Huss, "Adventures of 'Old Scout' in Oregon, 1905," *The Oregon Motorist,* 11:12 (September, 1931), 3-5.

70 *Forest Service Atlas, 1907* (Washington, 1908), 8.

71 Summarized in Dana, *Forest and Range Policy*, 185, 187.

72 Files of C.B. McFarland, 1909-1946, File Trans 7700-7, WNF/H.

73 7700 file, WNF/H.

74 H.S. Graves 1915 Diaries, Sterling Memorial Library, Yale University, are valuable for this activity.

75 Robert S. Wallace, "A Report on the Need for Forest Road Construction in Lane County, Oregon," August 25, 1915, File 7700-5, WNF/H.

76 File 7700-4, WNF/H.

77 Research Compilation Files, R6, R695, N.A.

78 C.J. Buck, "How Telephones Saved Lives," *American Forestry*, 16:11 (November, 1910), 649.

79 Bowerman, History of the West Boundary District, WNF/H.

80 McFarland Files, WNF/H.

81 Gary Craven Gray, *Radio for the Firelines: A History of Electronic Communication in the Forest Service* (Washington, 1972), 12-13.

82 Gray, *Radio*, 11-12; Ruth Hyland McFarland, *The Ranger's Wife* (mss., n.d.) C.B. McFarland File, WNF/H.

83 The accounts of the electric trust given by Gifford Pinchot, *Breaking New Ground*, 333-339; and Jenks Cameron, *The Development of Governmental Forest Control in the United States*, 300-307, are greatly at variance with each other. This is an area that needs more research. The Waldo Lake project was the major one embarked on during this period, but it will be studied as a separate unit, in Chapter V. Administrative Sites File, WNF/H.

84 Historical File, McKenzie Bridge Ranger Station.

85 John D. Scott, *We Climb High: A Chronology of the Mazamas 1894-1964* (Portland, 1969), 1-6.

86 Scott, *We Climb High*, 6-40.

87 Box 14684, Portland Forest Service Warehouse, has a large file on the trail and projected highway, including Cleator's trail diaries. WNF/H also has some files, which for the most part duplicate the Portland holdings. Cleator was a major architect of Region 6 recreational plans. See also articles on wilderness management and wilderness preservation in Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History* (New York, 1983), II, 682-699; David Nicholas Baldwin, *The Quiet Revolution: Grass Roots of Today's Wilderness Preservation Movement* (Boulder, Colorado, 1972); and Susan Flader, *Thinking Like a Mountain: Aldo Leopold and the Evolution of an Ecological Attitude Toward Deer, Wolves, and Forests* (Columbia, Missouri, 1974).

88 Scholarship on this development is not satisfactory. The decentralized nature of the Forest Service, and lack of satisfactory regional studies, make for difficulties in making good overall studies. The cooperation of state and private foresters has also been largely overlooked. A convenient summary of policy is found in C. Frank Brockman, *Recreational Use of Wild Lands* (New York, 1959). For a good contemporary account, by a leader in policy making, see Robert Marshall, "The Forest For Recreation," *National Plan for American Forestry* (73d Cong. 1st Sess., Doc. 12:1, 463-487).

89 C.H. Rachford to C.C. Hall, September 1, 1922, F.S.-Grazing-R6, RG 95, National Archives. The grazing files have many other instances noted. Blue River File, WNF/H has an account of one such incident, as does Knowles, *Honeymoon on Horseback.*

90 *The Ranger,* 6:9 (1931), 3; 6:3, 27; John D. Scott, "The Three Sisters Primitive Area," *Mazama,* 33 (1951), 53-54.

91 Brockman, *Recreational Use of Wild Lands,* and Marshall, "Forest Recreation" give national views. For regional views see C.M. Granger, "Harmonizing Lumber and Aesthetics," *American Forestry,* 23 (1917), 299-302; C.J. Buck, "The Place of Recreation in the Forest Program," *Journal of Forestry,* 31 (1933), 191-198; Buck, "A Forester's Work in Recreation," *Oregon Agricultural College Forest Club Annual Cruise,* 10 (1929), 13-17, 70-72; F.W. Cleator, "Recreational Objectives in National Forest Administration," *University of Washington Forest Club Quarterly,* 3:2 (1924), 13-17, and Cleator, "Recreational Objectives: Forest Service Plans for Public's Pleasure," *Parks and Recreation,* 7:5 (1924), 467-475. Two excellent studies of Oregon State activities are Thomas R. Cox, "The Crusade to Save Oregon's Scenery," *Pacific Historical Review,* 37 (May, 1968), 179-199, and Cox, "Robert W. Sawyer and the Birth of Oregon State Parks," *Pacific Northwest Quarterly,* 64 (January, 1973), 21-29.

92 Wooley, *Going to Mt. Hood;* Scott, *We Climb High;* Howard Horowitz, "The Landscape of Hot Springs and Mineral Springs in Western Oregon," Geography M.S. Thesis, University of Oregon, September, 1973; Lawrence Rakestraw, Fred Stormer, and Christopher R. Eder, "A Second Yellowstone: William G. Mather and the Grand Island Game Preserve," *Journal of Forest History,* 21:3 (July, 1972), 156-163.

93 Breitenbush Hot Springs File, WNF/H.

94 Foley Springs, Belknap Springs, and Terwilliger Hot Springs Files, WNF/H.

95 Horowitz, "Hot Springs," 71.

96 McCredie Springs File, WNF/H.

97 C.M. Granger, "Harmonizing Lumber and Aesthetics," *American Forestry,* 23:5 (May, 1917), p. 299-302; *Six Twenty-Six,* 4:5 (March, 1920), 1-2; T.T. Munger, "Scenic Strip," *Six Twenty-Six,* 7:12 (December, 1923), 20; E.A. Sherman, "Use of the National Forests of the West for Public Recreation," Society of American Foresters *Proceedings* 11:3 (July, 1916), 292-296; USDA Forest Service Pacific Northwest Region Lands Handbook (Washington, 1932), 69-71.

98 Robert Marshall to C.J. Buck, November 11, 1938, Box 14683, Portland Warehouse.

99 Pamelia Lake Group Blueprint, WNF/H.

100 C.C. Hall, Report of Marion Lake Unit Recreation Plan, June 3, 1925, WNF/H.

101 Fish Lake Recreation Plan, May 8, 1923, WNF/H; Fish Lake File WNF/H.

102 "Linton Lake Recreational Plan" by E.H. Hall, 1932; "Gold Lake Recreation Area," April 1934; "Lake Melakwa Recreational Plan," by E.H. Hall, all in Recreational Atlas, WNF/H.

103 C.C. Hall, Breitenbush River Recreation Unit, April 22, 1930, WNF/H; F.W. Cleator, Breitenbush River Scenic Strip, October 31, 1923. *Six Twenty-Six*, 4:11 (June, 1920), 24-25; *Oregon Journal*, March 14, 1929; Rec. file 2300, WNF/H.

104 F.W. Cleator, "Upper McKenzie Recreation Area," 1929; H.E. Vincent, "McKenzie Bridge Campground," June 4, 1920; F.W. Cleator, "McKenzie Highway Recreation Unit," April 20, 1928, all in WNF/H. R.F. Grefe, "McKenzie Highway Recreational Unit," May 25, 1929, Recreational Atlas, WNF/H.

105 C.H. Purcell, District Engineer to J.M. Meyers, Highway Engineer, Portland, January 9, 1920; F.W. Cleator, Memorandum, Recreation File 2300, WNF/H. C.J. Buck to F.W. Cleator, March 20, 1928, McKenzie Highway Unit, Recreational Atlas, WNF/H.

106 McCredie Springs File, WNF/H. Willamette Highway Recreation Unit, 1939, Recreational Atlas, WNF/H.

107 Thornton T. Munger, *Forest Research in the Pacific Northwest*, an interview conducted by Amelia R. Fry (Berkeley, California, University of California Oral History Office, 1967), 40-44; Munger, "Fifty Years of Forest Research in the Pacific Northwest," *Oregon Historical Quarterly*, LVI:3 (September, 1955), 226-247; Munger, "My Connection with the Early Days of Forestry," letter dated October 1, 1940, to Gifford Pinchot, located in Container 988, in the Pinchot Collection, Library of Congress, Washington DC, 15 pages; Reforestation File, 2400d-6, WNF/H; Administrative Sites File, Experiment Stations, WNF/H.

108 Munger, "Fifty Years"; C. Frank Brockman, *Recreational Use of Wild Lands* (New York, 1959), 168-169; Ivan Doig, *Early Forestry Research: A History of the Pacific Northwest Forest and Range Experiment Station, 1926-1975* (Portland, 1976), 5-13.

109 The literature is voluminous on the development of the cooperative fire control in the Northwest. Two convenient accounts are George T. Morgan, "The Fight Against Fire: Development of Cooperative Forestry in the Pacific Northwest, 1900-1950," Ph.D. Thesis, Department of History, University of Oregon, 1964, 125-165; Rakestraw, *Forest Conservation*, 319-325.

110 Development of these technological devices can be followed best in the *Six Twenty-Six* and *The Ranger*. On the Osborne firefinder see Fire Control, Equipment, A-6, Box 19, RG 95, National Archives. Published material includes Florisa Hamilton, *Forty Years of Western Forestry: A History of the Effort to Conserve Forest Resources by Cooperative Effort* (Portland, 1949).

111 Charles McKinley, *Uncle Sam in the Pacific Northwest* (Berkeley, 1952), 287-296, gives an excellent account of fire control activities.

112 *Six Twenty-Six,* 14:5 (May, 1932) Supplement, 1-5.

113 *The Ranger,* 14:9 (September, 1930), 5-6.

114 Linn County Fire Patrol Association, *50th Annual Report* (Sweet Home, 1961), Sweet Home Historical File.

115 *Six Twenty-Six,* 11:5 (May, 1927), 6; 11:6 (June, 1927), 8-9; 12:8 (August, 1928), 3-5.

116 Fred E. Ames, "Fire Prevention in National Forest Timber Sales in the Douglas Fir Region," *Journal of Forestry,* 21:1 (January, 1933), 59-62.

117 The story is admirably summarized in Henry Clepper, *Professional Forestry in the United States* (Baltimore, 1971), 166-177. Regional correspondence on the Army Air Corps patrol is found in Fires Control Corr., 09-17, Air Patrol reports, Box 9, RG 95, National Archives. On carrier pigeons, see FS Fire Control 1905-1937, Fire Control-Air Patrol, Box 6, RG 95, National Archives.

118 E.T. Allen, *Practical Forestry in the Pacific Northwest* (Portland, 1911) gives a good view of timber harvest as it was then. Stewart H. Holbrook, *Holy Old Mackinaw: A Natural History of the American Lumberjack* (New York, 1938) is the classic popular history of the lumber industry.

119 Historic Files in Eugene, Sweet Home, Oakridge, and Detroit carry information on small sales.

120 George Cecil, "Forest Service Lumber Sale Contracts," *The Timberman,* 15:11 (September, 1914), 69-72.

121 Detroit Ranger Station Historical File; Logging Methods File, WNF/H; *Six Twenty-Six,* 8:3 (January, 1924), 2; 8:17 (July, 1924), 9; *The Ranger,* 1:2 (April, 1924).

122 Harold S. Bowerman, "West Boundary Ranger Station Notes," *Timberlines,* 20 (June, 1971), 26-28; C.B. McFarland, "Early History of the Upper Willamette Valley," McFarland File, WNF/H; *Lane Reporter,* 1:12 (1959); *Lane County Historian,* 18:3 (September, 1973), 24.

123 B.F. Hoffman, "Report on an Appraisal Covering the Proposed Timber Sale on the North Fork of the Middle Fork of the Willamette River," (January, 1923) WNF/H; John F. Preston to District Forester, July 17, 1923; W.B. Greeley, Sales Prospects, July 5, 1923, North Fork Middle Fork, Willamette River Unit, in Sales Folder, Western Lumber Company Folder II, 2400b-3 WNF/H.

CHRONOLOGICAL SUMMARY, 1905-1933

1905

The Transfer Act of February 1 (33 Stat. 628) (1) transferred the administration of the forest reserves from the Secretary of the Interior to the Secretary of Agriculture; (2) covered all receipts from the forest reserves for a period of five years into a special fund to be available, until expended, as the Secretary of Agriculture might direct, for the protection, administration, improvement, and extension of the reserves; (3) provided that forest supervisors and rangers should be selected, when practicable, from the states or territories in which the reserves were located; (4) authorized the export of pulpwood and wood pulp from Alaska; and (5) granted rights-of-way for dams, ditches, and flumes across the reserves for various purposes under regulations prescribed by the Secretary of the Interior and subject to state laws.

The "Law Enforcement Authority" Act of February 6 (33 Stat. 700) authorized the arrest by any officer of the United States, without process, of any person taken in the act of violating the regulations relating to forest reserves and national parks.

The Agricultural Appropriations Act of March 3 (33 Stat. 861, 873) permitted timber on forest reserves to be exported from the state or territory (including Alaska) in which cut except in the Black Hills (South Dakota) and Idaho. This provision was made general in 1913. The Act also changed the name of the Bureau of Forestry to Forest Service, effective July 1. Another portion of the act also repeated the provisions of the Act of February 6th authorizing forest and park officers to arrest without process any person taken in the act of violating the laws and regulations relating to forest reserves and national parks.

The Act of March 3 (33 Stat. 1264) repealed the lieu-land provision of the act of 1897 but permitted the perfecting of valid selections already made.

1906

Beginning January 1, a charge was made for the first time for grazing on the forest reserves.

The American Antiquities Act of June 8 (34 Stat. 225) forbade anyone, without proper authority, to appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument or any object of antiquity on lands owned or controlled by the government of the United States. It also authorized the President to establish by proclamation national monuments for the preservation of features of historic, prehistoric, and scientific interest, under administration of the Department already having jurisdiction over the land in question. The area reserved must be as small as compatible with the proper care and management of the objects to be preserved.

The Forest Homestead Act of June 11 (34 Stat. 233) authorized the Secretary of Agriculture to open for entry, through the Secretary of the Interior, forest reserve lands chiefly valuable for agriculture which were not needed for public purposes and which in his judgement might be occupied without injury to the forest. Each tract was to be surveyed by metes and bounds and must not exceed 160 acres in area or one-mile in length. Commutation was not allowed.

The Agricultural Appropriations Act of June 30 (34 Stat. 669, 684) provided that 10 percent of all money received from the forest reserves during any fiscal year, including 1906, was to be turned over to the states or territories for the benefit of the public schools and public roads of the

counties in which the reserves were located, but not be the extent of more than 40 percent of their income from other sources. It also forbade unrestricted spending after June 30, 1908, from the special fund set up in 1905.

1906-1907

The Senate and House of Representatives passed separate but similar resolutions requesting the Bureau of Corporations to investigate the lumber industry.

1907

The "Disposition of Receipts from National Forest Revenues" Act of March 4, 1907 (34 Stat. 1269) provided that money received by the Forest Service (timber, permits, etc) shall be deposited in the U.S. Treasury. Another provision of the Act changed the name of the forest reserves to national forests.

The Act of March 4 (34 Stat. 1271) stated: "Hereafter no national forest shall be created, nor shall any additions be made to one heretofore created within the limits of the States of California, Washington, Idaho, Montana, Colorado, Wyoming, Arizona, or New Mexico, except by Act of Congress." This provision removed the authority of the President to establish national forests by proclamation, without Congressional consent. However, just before the Act was signed into law, Gifford Pinchot and President Roosevelt established millions of acres of new national forests (afterwards referred to as the midnight reserves) in these states.

1908

The Act of May 23 (35 Stat. 251, 260) increased the payment of the states for the benefit of county schools and roads to 25 percent of the gross receipts from national forests, eliminated the 40 percent limitation, and made the legislation permanent.

Present Regional Office (then called District Office) organization of the Forest Service was put into effect on December 1. Edward T. Allen served as the first District (Regional) Forester starting in December 1908.

1909

The Western Forestry and Conservation Association was organized and E.T. Allen resigned from the Forest Service to take charge of the new organization in November 1909. Charles S. Chapman took over as District (Regional) Forester in December.

1910

Gifford Pinchot fired as chief of the Forest Service by President Taft after Pinchot and Interior Secretary Richard A. Ballinger were in public disagreement over the management of Alaska lands. Henry Solon Graves, a long-time friend of Pinchot's as well as his second in command, was appointed as the second Chief of the Forest Service.

1911

The Weeks Act of March 1 (36 Stat. 961): (1) authorized the enactment of interstate compacts for the conservation of forests and the water supply; (2) appropriated $200,000 to enable the Secretary of Agriculture to cooperate with any state which had provided by law for a system of forest-fire protection; and (3) appropriated one million dollars for the fiscal year 1910 and two million dollars for each succeeding fiscal year until June 30, 1915, for use in the examination, survey, and acquisition by the government of lands located on the headwaters of navigable streams, it also created a National Forest Reservation Commission to pass upon lands approved for purchase and to fix the price at which purchases shall be made and provided for the protection and administration of acquired lands.

The Act of March 4 (36 Stat. 1235, 1253) authorized the head of the Department having jurisdiction over public lands, national forests, and reservations of the United States to grant rights-of-way for transmission, telephone, and telegraph lines for a period not exceeding fifty years.

The Bureau of Corporations submitted a comprehensive report on the lumber industry in four parts.

C.S. Chapman, District (Regional) Forester, resigned in March to work with the Weyerhaeuser Lumber Company. George H. Cecil appointed new Forester in April.

1912

The Agricultural Appropriations Act of August 10 (37 Stat. 269, 287): (1) directed the Secretary of Agriculture to select, classify, and segregate all lands that may be opened to settlement and entry under the homestead laws applicable to national forests; (2) authorized and directed the Secretary to sell timber at actual cost to homestead settlers and farmers for their domestic use; and (3) made 10 percent of the gross receipts from national forests available for expenditure by the Secretary of Agriculture for the construction of roads and trails within national forests. The latter provision was made permanent by the act of March 4, 1913 (37 Stat. 828, 843).

1913

The "Expenditures From Receipts" Act of March 4 (37 Stat. 828) provided that 10 percent of all moneys received from the national forests would be returned to the states for use roads and schools.

1915

The Branch of Research was established in the USDA Forest Service, with Earle H. Clapp in charge.

The Agricultural Appropriations Act of March 4 (38 Stat. 1086, 1101) authorized the Secretary of Agriculture to grant permits for summer homes, hotels, stores, or other structures needed for

recreation or public convenience in national forests in tracts of not more than five acres and for periods of not more than thirty years.

1916

The Act of July 11 (39 Stat. 355, 358) appropriated one million dollars a year for ten years for the construction of roads and trails within or partly within national forests when necessary for the use and development of their resources. Additional appropriations of three million dollars a year for the same purpose were made for the fiscal years 1919, 1920, and 1921.

The Agricultural Appropriations Act of August 11 (39 Stat. 446, 462) authorized the Secretary of Agriculture to require purchases of national forest stumpage to make deposits adequate to cover the cost of disposing of brush and other debris resulting from cutting operations. The proviso authorizing return to the purchaser of any deposit in excess of the amount actually required for the work was repealed by act of April 24, 1950 (64 Stat. 82). The 1916 act also authorized the Secretary, under prescribed general regulations, to permit the prospecting, development, and utilization of the mineral resources of lands acquired under the Weeks Act of 1911.

The Act of August 11 (39 Stat. 446, 476) authorized the President to establish refuges for the protection of game animals, birds, or fish on any lands purchased under the Weeks Act of 1911.

1920

Henry S. Graves resigned as Forester and Alfred F. Potter as Associate Forester. They were succeeded by William B. Greeley and Edward A. Sherman.

1920

The Act of June 10 (41 Stat. 1063) created the Federal Power Commission consisting of the Secretary of War, Secretary of the Interior, and Secretary of Agriculture, with authority to issue licenses for a period not exceeding fifty years "for the development and improvement of navigation, and for the development, transmission, and utilization of power across, along, from or in any part of the navigable waters of the United States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water of water power from any Government dam."

1921

The Federal Highway Act of November 9 (42 Stat. 212, 218) started the practice of appropriating funds specifically for the construction of "forest-development roads" and "forest highways." Cooperation with states was authorized but not required.

1922

The General Exchange Act of March 20 (42 Stat. 465) authorized the Secretary of Agriculture (through the Secretary of the Interior) to exchange surveyed, nonmineral land or timber in

national forests established from the public domain for privately owned or state land of equal value within national forests in the same state.

The Agricultural Appropriations Act of May 11 (42 Stat. 507, 520) made the first appropriation ($10,000) for the improvement of public campgrounds in national forests, with special reference to protection of the public health and prevention of forest fires.

1923

The Act of March 4 (42 Stat. 1445) extended the provisions of the Enlarged Homestead Act of 1909 to homestead entries in national forests under certain conditions.

1924

The Clarke-McNary Act of June 7 (43 Stat. 653) authorized appropriations to enable the Secretary of Agriculture to cooperate in forest-fire control with states meeting prescribed standards, in the growing and distribution of planting stock to farmers, and in promoting the efficient management of farm wood lots and shelterbelts; authorized the purchase of lands anywhere on the watersheds of navigable streams and for timber production as well as streamflow protection; authorized acceptance of gifts to be added to the national forests; authorized the Secretary of Agriculture to report to Congress such unreserved public timberlands as in his judgment should be added to the national forests; and authorized the creation of military and naval reserves as national forests, without interference with their use for military and naval purposes.

1925

A system of ten-year permits for grazing on western national forests was put into effect by the Forest Service on January 1.

The Act of February 28 (43 Stat. 1090) amended the General Exchange Act of 1922 to permit either party to an exchange to make reservations of timber, minerals, or easements, the values of which shall be considered in determining the values of the exchanged lands, provided that such reservations shall be subject to the tax laws of the states concerned.

George H. Cecil, District Forester, was gone by February and replaced by Chris M. Granger.

The "Land Acquisition" Act of March 3 (43 Stat. 1132) authorized the exchange of land or timber for land within the exterior boundaries of national forests acquired under the Weeks Act of 1911 or the Clarke-McNary Act of 1924, on an equal-value basis.

1928

The McNary-Woodruff Act of April 30 (45 Stat. 468) authorized appropriation of two million dollars in 1928-1929, of three million dollars in 1929-1930, and of three million dollars in 1930-1931 for the purchase of land under the Weeks Act of 1911 and the Clarke-McNary Act of 1924.

Not more than one million acres of land was to be purchased in any one state primarily for timber production.

William B. Greeley resigned as Forester on May 1 and was succeeded by Robert Y. Stuart.

The McSweeney-McNary Act of May 22 (45 Stat. 699) authorized a comprehensive ten-year program of research in all phases of forestry and range management, including a timber survey, with an annual appropriation amounting to $3,625,000 by the end of the period, and thereafter such amounts as needed to carry out the provisions of the act.

1929

The Stock Market crash on October 29, 1929 (afterward known as "Black Tuesday"), started a 12-year period called the "Great Depression."

1930

The Knutson-Vandenberg Act of June 9 (46 Stat. 527) authorized appropriation of not to exceed $400,000 a year by the fiscal year 1934 for reforestation activities on the national forests and provided that additional charges could be made in timber sales to provide a special fund for reforestation or silvicultural improvement of the cutover area included in the timber sale.

District Forester Chris M. Granger transferred to the Washington Office and was replaced by Clarence J. Buck.

1933

Franklin Delano Roosevelt took office as President on March 20, 1933. The "New Deal" era began.

Chapter IV
DEPRESSION AND WAR, 1933-1945

INTRODUCTION

Marion Clawson and Burnell Held, in their classic study of the Federal lands, remarked on the first era in Federal land management:

> In many ways the period of custodial management was highly important...Custodial management opened the reserved areas to use; it prevented the most severe wastage, especially from fire; and it reduced loss from theft and trespass. During this era also, substantial public support was developed for the various forms of Federal land management. Perhaps its greatest achievement was the devising and improving of techniques of federal resource management — techniques that would have their greatest test in the years ahead. [1]

Nineteen thirty-three marked the creation of the Willamette National Forest as an administrative unit—its coming of age from one point of view, and the ending of a period of gestation from another. The 40 years from the establishment of a forest reserve in the area and the establishment of the Willamette National Forest as an administrative unit had been marked by many changes. These included the establishment of a system of administrative decentralization, a major source of strength for the Forest Service. It was based on delegation of authority from the Washington Office to the Region, thence to the separate national forests, and from them to the various ranger districts in the national forests. Also important was the development of a program of administrative federalism involving the Forest Service, other Federal agencies, Oregon's state agencies and private guild organizations, which were backed by Federal and state legislation, and a series of bilateral agreements. These agreements involved grazing, fire control, land exchange, cooperation in range and forest research, and recreation.

The period was marked also by growing popular support of the Service and its policies. The rangers were key men in mobilizing such support, living as they did, as members of the community, and working with all kinds of local and regional groups—Obsidians, Grangers, 4-H groups, school boards, universities, lumbermen's guilds, Boy Scouts, county grazing associations, representatives from the Warm Springs Indian Reservation, and church groups. They put in a great deal of "coal oil time" working with the community—locating section corners, giving talks to a variety of groups, carrying on search expeditions for lost children, arbitrating disputes over a variety of matters, listening to complaints about forest policy, and giving advice and guidance to visitors. The role of rangers' wives was no less important. They offered hospitality to visiting brass—a gallon of hot coffee and a huckleberry pie were always on hand if the Supervisor came visiting. If he was accompanied by the fire control chief, two pies were appropriate. She counseled employees on marital problems, administered first aid to the injured, and ministered to the indiscreet, who had been overcome by hospitality at a meeting of the Stockman's Association, or the "Concatenated Order of Hoo Hoo"; took over the telephone system in cases of fire; and worked with a host of community associations. Much of the strength of the Forest Service came from the fact that rangers and rangers' wives were highly respected

members of the community; and criticism of the Forest Service was more often directed to the "Swivel Chair Foresters" of the Washington Office or the "Swedes in green pants" in Portland, than to the local organization.

The period 1933-1945 was one of transition, marked by the administrative changes inherent in the creation of a new national forest, by the relief programs of the Great Depression, and a surge of new employees able to make material gains, and by the war, which involved new problems.

ADMINISTRATION

The Cascade and the Santiam National Forests were merged into a single administrative unit, the Willamette National Forest, in 1933. With 1,666,998 acres, it was the largest national forest in Oregon. However, the network of roads and trails, and the expanding telephone lines justified its organization as a single administrative unit. The earlier ranger districts—Detroit, Cascadia, McKenzie, West Boundary, and Oakridge—were retained.

Perry A. Thompson, who has been mentioned before, was named Supervisor. He was born in Conconcolly, Washington, in 1889. He worked on the Colville National Forest before World War I, and after the war he returned to the Colville in 1921. Between 1921 and 1930, Thompson worked on the Colville, Whitman, and Malheur National Forests. He then went to the Santiam in 1930 and with the merger became Supervisor of the Willamette. He was keenly interested in recreation, and during his term as Supervisor took advantage of the Civilian Conservation Corps (CCC) program to advance recreation developments in the forest, and recreation planning in the Region. He retired in 1939. [2]

His successor was John R. (Ray) Bruckart. Bruckart was another of the old timers. He entered the Forest Service in 1909 on the Snoqualmie National Forest, after serving for some years in the U.S. Cavalry. He took the ranger "short course"—three month's training—at the University of Washington in 1909. He later served on the Mount Baker, Olympic, and Columbia National Forests. A lover of hunting, fishing, horses, and skiing, he was deeply concerned with recreation, and in preparing places for recreationists which would allow people to enjoy the amenities and at the same time reduce danger of fire and vandalism. He desired a balance of protection and utilization. His essay, "Taming a Wild Forest," in the *USDA Yearbook of Agriculture* for 1949 is the best short history of the Willamette, and at the same time a good summing up of his personal philosophy. [3]

Both men ably bridged the transition between custodial management and intensive management. Thompson was innovative, looking ahead to the utilization of helicopters in forest management. He worked closely with Fred Cleator of the Regional Office, and with William Parke of the Willamette in planning recreation for the future. Of Bruckart and his associates, one man commented on their "common striving for excellence, toughness, and impatience with less than top performance, and yet a certain empathy for the average and a real push for training." [4]

In the Regional Office, C.J. Buck was elevated from the office of lands to become Regional Forester in 1930. Buck (as mentioned in Chapter III) had served in Region 6 since 1908, most of the time as Assistant District Forester in charge of lands. His term as Regional Forester was

marked by the Depression: The major effort of his administration was the handling of the Civilian Conservation Corps (CCC) and providing the staff, camps, and projects on the national forests, as well as camp staff for the CCC projects on O&C lands in western Oregon. In addition, there was the controversy over introducing selective cutting on national forest timber sales instead of clearcutting, and another controversy involving the enlargement of the Mt. Olympus National Monument at the expense of the Olympic National Forest, as well as giving the area national park status. He served until 1939, when he was transferred to Washington as inspector and assistant to the Forester after a "run-in" with President Roosevelt over Mt. Olympus. Three years later Buck retired. [5]

He was succeeded by Lyle F. Watts. He was a graduate of the Iowa State school of forestry, earning there the B.S. in 1915 and M.S. in 1928. He had worked, before coming to the Pacific Northwest, in Wyoming, Idaho, and Utah, and in 1928 organized and served for a year as dean of the school of forestry at Utah State Agricultural College. From 1931 to 1936 he worked at the Northern Rocky Mountain Forest Experiment Station, first as the senior siliviculturist, then in 1935 he was selected as the new Director. In 1936 Watts became Regional Forester in Milwaukee, Wisconsin. Watts became the R-6 Regional Forester in 1939, at a time when the CCC program was reducing and the war clouds were building. Watts was deeply interested in development of the timber industry on a sustained yield basis. Watts served until 1943 and then moved to the Washington Office as Forester. He retired from the Forest Service in 1952. [6]

Watts was succeeded in 1943 by Horace Justin Andrews. H.J. "Hoss" Andrews was a native of Michigan and a 1916 masters graduate in forestry from the University of Michigan, and from 1914-17 he worked on timber reconnaissance projects on the Santiam National Forest, and various forests in California and Colorado. He served in the Army Air Corps in World War I, and then worked for the State of Michigan, first as director of the land economic survey, then as assistant state forester. His work in Michigan gained him a reputation as a leader of a national movement in which economic surveys of forest resources were applied to all important forest regions of the United States. He joined the Forest Service in 1930 as senior forest economist and director of the forest survey of Washington and Oregon conducted by the Pacific Northwest Forest and Range Experiment Station. In 1938 he returned to Michigan as a research professor in wild land utilization, but a year later came back to Portland as Assistant Regional Forester in charge of the division of state and private forestry for Region 6. He was appointed Regional Forester in 1943 and served until his death in 1951. He was a versatile, popular forester, well suited to serve in the shift from custodial management to intensive management. [7]

TIMBER, SALES

The lumber industry underwent a series of drastic changes in the period 1933-1945, which altered the nature of the industry and its relationship with the Forest Service. The changes may be summarized as follows:

> (1)—There was a major shift from private to public lands as a source of timber. As private lands came to be cut over, the lumber companies looked increasingly to the Federal timber.

(2)—There were changes in ownership and management of lumber companies. Many went under because of the Depression; some for other reasons.

(3)—"Sustained yield" became the goal. It had traditionally been the goal in Forest Service management, but now became the goal on private and state forests as well.

(4)—There were major changes in logging technology. The era of railroad logging and river drives gave way to tractor logging and truck transportation.

(5)—The changes in logging technology were accompanied by changes in cutting practices.

(6)—There were major improvements in fire control.

(7)—In the national forests, there were major changes in land use patterns and management practices. Our concern will be on their effect on the Willamette National Forest. [8]

With the 1930s came the beginnings of a major shift to the national forests as a source of lumber. The big Westfir timber sale, up the North Fork of the Willamette River, was the first of a series of sales involving wholly, or in part, national forest timber. The major sales of this type were in the Oakridge area since this area had railroad transportation. The Hammond Lumber Company, which had several sales on Forest Service land in the Detroit area, went broke in 1936. Lumber companies around the Sweet Home area still had private timber lands to utilize, and timber sales were aggressively pressed in the revested Oregon and California (O&C) Railroad grant lands outside the Willamette National Forest. The war gave impetus to timber sales, however, and after 1941 there were a number of large sales in the Sweet Home and McKenzie Districts. [9]

New companies and interests emerged. The Westfir Lumber Company, which had the Westfir sale, got into financial difficulties, and was taken over by the Edward Hines interests, a Burns, Oregon, company. The Hines interests took over not only the company but continued its name and took over the Forest Service sales. They also took over some of the holdings of the Penn Lumber Company. The Louis W. Hill interests, a St. Paul firm, took over some of the privately owned sections, which were the former Santiam Wagon Road grant lands, in the Sweet Home and Detroit Ranger Districts. [10]

The new companies and some of the older ones accepted the idea of sustained yield management. Sustained yield has been defined in different ways by different people. Essentially it is the application of sound silvicultural principles in timber harvest in order to maintain lands continuously in permanent production. Agency policies in the government differed; on the Indian lands, for example, they were accompanied by trying to attain sustained yield along with maximum financial returns. With the Forest Service, it meant coordinating sustained yield in timber production with other forest uses. In the private sector it meant some pulling and hauling between the business office and the company forester. A foresters plans for the long run often were at odds with the views of some "fish-eyed accountant in the company office who wanted maximum profits." [11]

Coupled with the term "sustained yield" was the term "industrial forestry." This meant timber growing as a business enterprise. As defined by T.T. Munger, "Industrial forestry is the employment by an individual or corporate owners in woods operations of methods of silviculture and forest protection that are intended to promote the continued growing of forest crops....It would ordinarily imply at least the equivalent of such silvicultural and protection measures as are recommended for each forest region in the 'minimum requirement' studies of the U.S. Forest Service." The movement developed in the 1920s and was aided by a series of state and Federal acts. These include the Weeks Act of 1911 which laid the basis for Federal-state cooperation in forestry and materially increased the acreage of state and private lands protected from fire; the Clarke-McNary Act of 1924 involving both fire protection and planting; the growth of protective associations in the Northwest; and the Oregon Compulsory Patrol Law of 1913 making it mandatory for the private timberland owners to protect their lands. Two New Deal pieces of legislation aided this: The Emergency Conservation Work Act of 1933, which set up the Civilian Conservation Corps which built fire breaks, truck trails, plantations, and fire lines, and encouraged private owners to carry on such developments on their own land; and the National Industrial Recovery Act of 1933, which set up codes of fair competition for industry, and which, in Article X, set up codes of forest practices. These practices included minimum standards of forest management and encouraged timber harvesting under sustained yield management. [12]

Two pieces of legislation, one state and the other Federal, gave impetus to sustained yield forestry. In 1941 the State of Oregon passed the Oregon Forest Conservation Act which provided that "any person, firm or corporation cutting live timber for commercial use from lands within the state of Oregon shall... leave reserve trees of commercial species deemed adequate under normal conditions to maintain continuous forest growth and/or provide satisfactory restocking to insure forest growth." Other parts provided that the operator protect the residual stands from fire or other destructive forces. The regulations were flexible; in general, they required that not less than five percent of each quarter section be stocked with seed-bearing trees. Plans of operation were to be submitted to the state forester. In operation, the act proved to be ineffectual and was merely a paper plan.

The gospel of sustained yield was discussed a great deal among the operators owning timber in or near the Willamette National Forest. The journals of David Mason, a consulting forester who played a large part in development of the sustained yield idea, show numerous conferences with representatives of the Louis Hill and Edward Hines interests. H.J. Cox, of the Willamette Lumberman's Association, proclaimed in 1936 that the Westfir operation the only sustained yield operation in the United States, and Supervisor Bruckart boasted of Westfir as the largest sustained yield operation in Oregon. [13] However, much of the discussion on sustained yield proved to be premature and overly optimistic.

Formal recognition of sustained yield came in 1944 with passage of the Sustained-Yield Forest Management Act. This authorized the Secretary of the Interior or the Secretary of Agriculture to establish cooperative sustained yield units, consisting either of Federal forest and private forest land or Federal sustained yield units consisting only of Federal forest land when, in their judgement, the maintenance of a stable community depended on Federal stumpage and when such stability could not be secured by usual timber sales. [14]

In the Willamette two attempts were made to establish sustained yield units under the law of 1944. One involved the Booth-Kelly interests near Oakridge. This failed apparently because of fear of monopoly. A second, in 1945, involved the Hill interests in the Sweet Home area. This plan was discussed for some time, but also failed. Probably the cause in this case, also, was monopoly; small owners disliked the sale of timber to an owner without competitive bidding, and for a long term. [15]

The period before 1930 was one in which railroad logging was the accepted method of timber harvest. From an economic viewpoint it was best adapted to large clearcuts so the merchantable timber could be harvested while the rails were in place. Having harvested the timber, the management would have the rails taken up and moved to another logging show. In 1923, Ted Flynn on the Stanislaus National Forest in California developed the idea of placing a blade on the front of a Cletrac crawler tractor. Shortly thereafter, the Forest Service and the Killifer Manufactoring Company built a prototype of this type of machine. By 1932, a track-mounted tractor equipped with a blade received Forest Service approval—mostly for trail construction. Shortly, there were many manufacturers and the bulldozers or "cats" (short for Caterpiller—one of the companies building the bulldozers), as they became known, were readily used to build roads into logging areas. Gravel roads and bulldozers caused truck hauling to supplant railroads for log transportation. From a silvicultural point of view this allowed for leaving of single trees or blocks of trees for harvest at some future time, and for the selective logging of merchantable trees within a stand. [16]

The airplane was used increasingly for timber reconnaissance. Planes could, by use of aerial photographs, locate and plot the best bodies of timber, estimate volume and species, and locate the best road sites. Their use was aided by the development of lightweight radio equipment which was used in both timber reconnaissance and fire control. [17]

Another change was the use of the power saw. Some experiments were made with power saws both electric and gasoline in 1936 testing them against CCC workers using cross-cut saws. The gasoline power saw was found to be much speedier than the crosscut saw by a factor of six to one. However, woodsmen were suspicious of the early power saws, and not until the war were they seriously considered for use. It was found in 1942 that two fellers with a power saw could fell a seven-foot Douglas-fir in 18 minutes, as against two hours for the crosscut; and power saws gained speedy acceptance. [18]

More efficiency in the woods was matched by better mill utilization. Low stumps and small tops became the rule in timber sales. With the war, a demand for piling for shipyards led to several piling sales in the Oakridge area; and a reduction in standard for piling led to the harvest of trees formerly considered culls. [19] In the Sweet Home area plywood was made from these logs. Because prices were rising, operators found it feasible to go over old sales and to salvage long butts or culls to peel. The plywood industry in the 1930s had been a very small one; with plywood being used for airplanes, buildings, and boats, there came a plywood boom. It enabled the use of lower grades of lumber and became a major industry during and immediately after the war. [20]

These changes were accompanied by major changes in cutting practices. In old growth Douglas-fir the accepted method of harvest was that of clearcutting. This method was adapted to the railroad logging system of the time, since all the accessible trees could be harvested and the rails taken up afterward. It was desirable from a silvicultural point of view, since Douglas-fir reproduces best in the sunlight rather than shade and it simplified problems of slash disposal. In 1936, however, Burt Kirkland of the Snoqualmie National Forest and Alex Brandstrom of the Wind River Experiment Station made a series of studies on tractor logging in Douglas-fir. They concluded that selective logging (removal of individual trees) was feasible in the Douglas-fir area A controversy arose over this, pitting Thornton Munger and Leo Isaac against Kirkland and Brandstrom. The Washington Office was interested in such experimentation, and Regional Forester C.J. Buck became "sold" on the selective cutting idea and ordered that all future sales be conducted on a selection basis. One of the earliest sales of this type was made in 1939 in the Westfir sale of ten million board feet, made with light selective cutting and a 30 percent initial cut. Selective cutting became the rule until 1941; then the war led to the need for increased production, and getting the logs out of the woods by the best and quickest possible method. Clearcuts came back. The selective cutting era led to a great deal of experimentation and to a flexibility on timber harvests. [21]

Forest research continued. In 1910, as has been mentioned, the first permanent growth plots made by the Forest Service were established in the Willamette. Study of them continued. Thornton T. Munger reminisced on the changes time had wrought. Of 1910, he wrote, "From Eugene it was a day's ride in a horse stage over mud roads, then a cross-country walk, a row across the Middle Fork of the Willamette River, and a scramble up the hillside to the heart of the great tract of even-aged second growth. When I last measured them in 1945 it was but an hours drive from Eugene and a half mile walk by trail to reach them. In 1910 the 50 year old trees had but little value; in 1945, at age 90 they were much sought. Every five years from 1910 on the trees had been remeasured and a progress report made." [22]

Willamette NF timber sales figures in the 1920s had reached 60 million board feet by 1929, the period of the Coolidge-Hoover prosperity. It fell to 14 million in 1932 and 1933, the years of the Depression, rose slowly during the 1930s, and rapidly during the war to reach the figure of 144 (see Appendix). Access roads, more efficient logging and milling methods, and demand led to timber production becoming, by the end of the war, the most important economic use of the Willamette National Forest.

The period of the thirties was marked by major changes in fire control. The Federal Emergency Relief Administration (FERA) and CCC work-relief programs gave the Forest Service a reservoir of manpower to whom they could give presuppression and suppression fire training, so they did not have to rely, as in the past, on recruiting men to fight fires from the skidroad areas of Seattle or Portland.

Twenty-, thirty-, forty-, or fifty-men crews with special training in fire fighting, who could be rushed to any fire by truck, were organized. The "one-lick" method of fire fighting was developed, first on the east side of the mountains, and then applied to the west side. It is essentially an application of the assembly line technique to building a fire line, with each man trained in the use of a special tool and a special place in the line. Thus, instead of one man being

responsible for a segment of the line, a crew of men, working at intervals of 8-20 feet—far enough so that the tools used would not endanger fellow workers—would work as a team to build the line. Line locaters would go first, trained men blazing the location of the line. Next would come a crew of axe men, cutting brush and down logs; next the Pulaski men, the heart of the team, who further cleared brush and started digging in the soil; next, the men with hazel hoes, who could widen the trail and dig deeper into mineral soil; and finally, the shovel men who would clear out the trail. Generally, 25 percent of the men were axe men and 25 percent Pulaski men; those with hazel hoes were about twice the number of the shovel men. Moving like a long snake around the trail, a crew was able to build a fire trail rapidly and effectively.

Many miles of access roads, partly to further timber sales and partly for fire control, were built, as were hundreds of miles of trail. The crawler tractor and bulldozer were increasingly used to build fire lines where terrain permitted, and planes used for fire spotting and for dropping tools or food. Dozens of lookouts were built during this period. The goal was to have lookouts which could see into every area, and to have all parts of the forest accessible within half an hour. Stake trucks got fire fighters to the fires quickly, and tank trucks and portable pumps brought water. Snags felled by CCC or FERA labor removed fire hazard. The Forest Service proved the usefulness of the chain saw in fire fighting in the 1941 Tumble Creek fire, where two chain saws were used to fell burning snags which were causing trouble. This episode called the value of chain saws to national attention. [23]

SUBSISTENCE HOMESTEADS

The New Deal period was one of social and economic experimentation. One idea that had a vogue at that time was for subsistence homesteads, that is, government aid in placing rural dwellers on tracts of land with decent housing and sufficient land on which to make a living, as a remedy for rural poverty. There were many aspects to this type of planning ranging from the Matanuska project in Alaska to the Malta project in Montana. The concept was actually an old one. In the Northwest it had taken the form of corporate or utopian colonies in Oregon and the Puget Sound area. There are elements of this type of thinking in the Forest Homestead Act of 1906. [24] An interesting development of this type occurred in the Oakridge area between 1931 and 1938. Oakridge and Westfir were the two largest forest communities in the Willamette National Forest. Detroit in the north was tributary to the larger settlement in Mill City; Blue River and McKenzie Bridge were hamlets; Cascadia, Lowell, and Sweet Home were on the periphery of the forest. Westfir and Oakridge, on the other hand, were well within the forest boundaries.

Oakridge was a long established incorporated village located on what had originally been an open prairie with groves of oak trees. Westfir, separated from Oakridge by a low timbered ridge, was a company town founded in 1924 as a result of the large timber sale up the North Fork. The combined population of the two towns in 1933 was about 1,000, with a rural population of about 600 nearby. Oakridge had a diversified economy based to a large extent on the forest, but there was also some agriculture, state and Federal work, and railroad work as well. Housing in both towns was substandard. In normal times the men worked in the mills, logging camps, and on the railroad, and some employment was available for transient workers. However, the lumber industry is subject to slumps, and in hard times the transients departed, the local workers faced

the prospect of being laid off, and there was some economic distress as the Great Depression of the thirties continued.

As the Depression deepened, Ranger C.B. McFarland and Axel Lindh of the Regional Office studied ways in which the distress might be alleviated. Their studies began in 1931. In March, 1933—twenty-one days after President Roosevelt was inaugurated—they issued a report entitled "The Oakridge Vicinity Recreational and Industrial Land Unit." It is interesting that this plan for rural resettlement antedated the establishment of the Resettlement Administration and was largely formulated before the New Deal came into existence. The basic philosophy was that woods and mill workers might have sufficient land to have decent homes, raise gardens, keep chickens, cows and hogs, so that in times of depression they could survive unemployment.

The report stated that though the Forest Service could supply the timber sales that would potentially keep employment up, stagnation in the lumber industry would make for periods when sales were not made. In these periods of cyclical depression, families with small tracts of land could have gardens as well as hogs, cows, and chickens to help them get through the hard times. Others would have more difficulty, particularly in Westfir where all the residents were tenants. There was need for small tracts to be sold or leased to establish "stability and permanence of community."

Land already classified as agricultural under the Forest Homestead Act was not adequate or well enough located for the purpose. McFarland and Lindh proposed that some 2,500 acres in T.21 S., R.3 E., be surveyed for residential tracts. They proposed that the land be divided into small homesites of one-quarter to one-half acre each; larger ones, from three to seven acres; community woodlots, and campgrounds. Small homesites would be leased at $10 per year, larger ones at $3 per acre. The area should be zoned with scenic strips and small industrial sites included. The authors felt that there were European precedents for this classification, particularly in Scandinavian countries. [25]

The program continued under study. It was given additional encouragement by President Roosevelt's endorsement of the idea. In a press conference in February 1934, he spoke of forested areas in Europe where small farms were combined with forest work. Chief Ferdinand A. Silcox studied the matter as one method of eliminating the "cut and get out" cycle of forest use. Meantime, a subsistence homestead division was set up in the Department of Agriculture. It eventually evolved into the Resettlement Administration, and this in turn into the Farm Security Administration under Rexford Tugwell. Tugwell was favorably impressed with the idea. [26] In April 1935, Regional Forester C.J. Buck wrote to the Forester recommending the proposal and suggesting that an initial 143 acres be set aside for industrial homesites. CCC labor could be used in clearing and surveying the lots, and homes built using local lumber at $2,500 per unit. With the increased number of Willamette National Forest personnel in the area, 25 or 30 units could be leased to Forest Service employees. [27]

Buck, meantime, authorized a further study of the project to be carried on by Robert W. Putnam, junior forester. Putnam's report is a thorough sociological study of the area. The objectives of the project, he reported were to "eliminate direct relief, elevate living standards, and fortify the community against subnormal economic conditions." The people were able, in periods of relative

prosperity to maintain themselves without outside help, but the Great Depression had reduced many to "abject poverty," and in 1933, 50 families were on relief. In Westfir the tenants rented from the company and obtained their supplies from company stores. This led to a growing indebtedness (Putnam used the term "serfdom" but Regional Forester C.J. Buck, in a penciled note, questioned the appropriateness of the term). The soil was arable; amenities such as churches, schools, stores, community hails, banks, and lodges for fraternal organizations were available. Putnam tentatively selected four tracts for homesites, totaling 53 acres. Cost of each homesite unit would be $2,844 and include house, garage, water, and septic tanks. [28]

However, the plan fell victim to interagency rivalries in Washington. On August 26, 1935, Tugwell wrote to Roosevelt: "You spoke to me the other day about forest communities such as they have in the Black Forest. Since August 1, a plan for one of these has been at Works Progress [Administration - WPA]. It has been decided I understand to smother it there. I just want to be relieved of responsibility." In September, Earl S. Pierce of the Forest Service lands division, wrote to Regional Forester Buck that the President felt it "would not serve the purpose of the relief program as fully as desired." [29]

Despite the rejection of the 1935 plan, sociological studies of the area continued to make the area a sustained yield unit. In 1938 the former plan was updated and reevaluated by assistant forester John B. Hongly and approved by Supervisor John R. Bruckart, which illustrated the changes that had come about over a period of years. A sharp contrast was drawn between Westfir and Oakridge. Westfir, a company town with a population of 957, had an expanding economy. But, as Hongly wrote, "The management is busy with its industrial and financial problems and...the Forest Service has not fully realized its social responsibility." Westfir had minimal public facilities—a grade school and a community hail. Oakridge, an incorporated village of 656 people with an adjacent rural population of 600, had its own government, in contrast with Westfir. Oakridge had a wide variety of public and semi-public facilities.

By the late 1930s, there was general prosperity; people on relief amounted to one percent of the population, as compared with 20 percent in 1933. Westfir developed a policy of recruiting married men with families for their workforce, as opposed to single men who were likely to be drifters. The mill employees belonged to the Industrial Employees Union (I.E.U.), and when a CIO organizer tried to organize the workers for the AFL-CIO, he was forcibly ejected from a union meeting. Wages were, on the average, five cents per hour above union scale. With the wage-hour legislation of the New Deal, more labor was needed. Wages dropped from an average of $1,350 per year for a woods worker and $1,000 for a mill worker in 1929 to around $300 per year in 1932, then rising to previous levels by 1938. With shorter hours of work—the traditional 48 hour week had been reduced to 44—there was more leisure time, and more time for recreation. Baseball, football, hunting, and fishing were the major sports, and dances were given weekly in the community hall.

Housing in Westfir was still on the tenant basis, but the housing had been upgraded by the company. The 1935 report listed 85 percent of the houses as unsuitable; this had been reduced to 65 percent and would decline to 35 percent as baths and toilets were added. The company was making an effort to upgrade conditions in the town.

Oakridge had acquired a new city water system with the aid of the Public Works Administration (PWA) grant. It had grown in population from 186 in 1934 to 656 in 1938. The village had a lively social life, with organized recreation, Boy and Girl Scouts, and many women's organizations. The Forest Service employees had played a large part in these activities. Housing in Oakridge, largely privately owned, was substandard, and on the private land along the highway near the village some rural slums were developing.

In Westfir there was need to encourage the company to consider sales, under Federal Housing Administration (FHA) regulations, of some of the better homes; and meantime to continue to modernize the existing ones. There was need for a station for the Forest Service timber sale officer located in Westfir, and for modernization of the logging camps projected in the sales area There was also a plan to revive the Oakridge Industrial Homestead project.

For the Forest Service there was need to try to extend the employment period for short-term personnel. These men, primarily trail workers, packers, and fire control personnel were hired for three to six months. Efforts were made to extend the period of employment to eight or nine months. Some money for this came from Knutson-Vandenberg (K-V) funds. [30]

As Westfir continued to thrive as a center for lumber production, more amenities were established. One project was a community church. The community hall had served this purpose for a time but it was also used for other community doings, and well-waxed floors for a Saturday night dance were not compatible with church services. In the fall of 1940, a community meeting was held, a finance and building committee appointed, and donations collected. A CCC carpenter was hired to direct the work and the church built with contributed labor. Lumber was donated by the Westfir Lumber Company. The church, with its incense cedar floors, old growth Douglas-fir siding and myrtle wood pulpit, became a main center for community activity. [31]

In addition to becoming a center for sociological interest, the Westfir-Oakridge area became a major center for research in logging practices. The 1923 sale of 685 million board feet to the Westfir Lumber Company had been the largest sale the Forest Service had made up to that time. By 1941 Westfir was operating on its third sale, and was one of six companies in the Northwest to whom Forest Service sales totaled over a million dollars. [32] Westfir offered an excellent opportunity to study silvicultural advantages of various logging methods in old growth Douglas-fir stands ranging from pure stands 170-years old to decadent 480-year-old stands. Cutting methods had varied from clearcuts to light selective cutting, and logging methods had shifted from railroad logging to use of tractors and trucks. At that time researchers were interested in how to handle old growth Douglas-fir stands, and Westfir offered them a good laboratory for study. Experiments showed the need for flexibility; no one system could be applied overall to a large area. Operations needed to combine tree selection, group selection and clearcutting, tractor logging and high-lead logging. There was need for close control over contracts, and close cooperation between the engineering staff of the Forest Service and the foresters of both the Service and the company. [33]

WILDLIFE AND GRAZING

The era of the thirties and forties were years of major changes in management techniques relating to game and predators. Previously, the major emphasis in regard to game had been predator control, closed seasons, bag limits, and game refuges. Emphasis on habitat management now began to grow, especially a study of the role of predators in relationship to wildlife. These changes were sparked by some disastrous population explosions in areas like the Kaibab Plateau in Utah, due to overprotection and extermination of predators, who served as a natural control; and by research by a variety of scholars: Aldo Leopold in Wisconsin, George Shiras III in Michigan, and Ira Gabrielson of the USDA Biological Survey, among others. Their work was aided by local observers, such as Supervisor C.C. Hall and Ranger Corley B. McFarland. However, not until 1936 did the Forest Service establish a division of wildlife management. Much of the Biological Survey work was in predator control. On June 30, 1940, the Bureaus of Fisheries (Department of Commerce) and Biological Survey (Department of Agriculture) were combined to form the USDI Fish and Wildlife Service under the able leadership of Ira Gabrielson, a leading biologist of the Biological Survey. Under Gabrielson, there came a new emphasis on wildlife research.

In addition, in 1937 the Pittman-Robertson Act was passed. This placed a tax on sporting guns and ammunition. The money from the tax was to be used in acquisition of land, development of programs, and for research for wildlife conservation. The money would be distributed on a dollar matching basis to the states, in the proportion of 75 percent Federal money and 25 percent from the state. [34]

In the Willamette, game and fish management continued much as it had been during the previous decade. In 1936, McFarland reported stocking 21 lakes in the mountains with 215,100 fish, obtaining the fish from the Salmon Creek Fish Hatchery near Oakridge, and having packers and sheepmen cooperate in planting them. CCC labor was engaged in planting fish in various areas. Reports to the Biological Survey on game continued; they contained information on the health of elk herds, activities and status of predators, and winter kill among game birds. There came to be, after establishment of the Fish and Wildlife Service and passage of the Pittman-Robertson Act of 1937, increasing cooperation between state biologists and Forest Service personnel in reconciling timber harvest and game habitat management. The most rapid expansion of such activity, however, came after the war, when the G.I. Bill of Rights (1944) led to a rapid expansion of eligible war veterans taking wildlife management courses in the colleges and universities. [35]

Grazing continued in the time honored manner, but gradually became less important as an economic activity in the Willamette. The major reason was a decline in the amount of grazing land. As one packer who had occupied the same range for 30 years said, "You've got a natural tree country here and not a grass country." Camps which had formerly supplied 30 days grazing now could supply 16 days at most; meadows formerly covered with grass now had a stand of lodgepole pine six feet high. Studies made in 1933 and 1934 indicated that reproduction was encroaching on range land at the rate of 2.5 percent per year. In 1922 the range available for grazing totalled 40,810 acres; by 1932 it was reduced to 38,075. In addition, the natural forces that had led to increase in open land—that is, fire were now pretty much a thing of the past. [36]

There were other factors as well. Mutton from New Zealand and Australia competed with the homegrown product after 1950. With more land in the high country dedicated to recreation, it became more difficult to find suitable sites for driveways to keep sheep off the highways, to travel across the divide, and to divert sheep travel from major recreational trails to lesser used ones. In 1937, areas around Mt. Jefferson, Three Fingered Jack, and on the Skyline Trail were closed to all but recreationists. Between 1938 and 1944 all camps along the Skyline Trail were put off limits; by 1946 the Waldo Lake area was closed to sheep but not to cattle, as was use of the road to Odell Lake and Rigdon. With recreational pack trains traveling the Skyline Trail and to favored highland camps, competition between sheep and pack stock for forage grew. [37] In addition, with the war preparation, wages for sheepherders could not compete with potential work in the shipyards, and many young men were called up for military service. The old herders and camp tenders were dying off and few succeeded them. By 1945 the grazing activity, which had once been the dominant economic activity in the Willamette, was on its way out. [38]

The grazing files for this period offer their usual vivid picture of range management. Relations between the Forest Service and grazers, herders, and camp tenders remained cordial, as has been noted. Camp tenders aided the Forest Service in stocking mountain lakes with fish, and on occasion herders and camp tenders reported and assisted in putting out lightning fires. CCC boys were delighted with the opportunity to view at first hand the stockman's west, and on occasion assisted the herders in persuading recalcitrant sheep to cross stock bridges or to locate wandering lambs. With increased use of the forest for recreation, sheepherders were ordered to dig garbage pits and otherwise police their camps. The Forest Service with CCC help continued range improvement; in 1943 the Oakridge Ranger District put in some drift fences, built one stock bridge, two corrals, and cleared 49 miles of stock driveway. Range research continued; the early studies made by John Kuhns in 1916 were used as a basis for study of changes in carrying capacity. Most of the allotments showed a drastic reduction of available feed. After increased range research some areas were opened to cattle and horses and closed to sheep. This was the case with Minto Mountain, the Waldo Lake area, and also around Oakridge where sheep occupied the high country and cattle allotments were in the Grasshopper and High Prairie areas. [39]

The 1940s marked the passage of an important era in the history of the forest, with the shift from grazing to timber production as the major economic activity. And just as the clash between order and adventure had sparked conflict between forest managers and sheepmen in the late 1890s, so clashes between timber production and recreation brought about a new series of conflicts in the period after the war.

RECREATION, AMENITY VALUES, DEVELOPMENTS

The thirties and forties continued the general trends established at an earlier period in regard to recreation, but some new factors that led to changes as profound as those in the timber industry were added. A new national emphasis was placed on the importance of recreation in the national forests. In 1933, pursuant to a Senate resolution introduced by Senator Royal S. Copeland, the Forest Service issued an overall plan for American forestry generally known as the Copeland Report. The section on recreation, written by Robert Marshall, summarized the varied uses of the forest for recreation and urged a process of classification and analysis of the needs of the people.

This important report was the basic philosophy on which the Service acted in its land management. [40]

The Copeland Report echoed ideas expressed by key Region 6 officers. C.J. Buck, writing for the OSC Forestry Club paper, stressed the need for recreational planning, for building campgrounds, and the need for topographical and vegetation maps for planning purposes. Writing in the *Journal of Forestry* in the year the Copeland Report was published, he, like Marshall, stressed the need for recreational planning. [41] In the Regional Office Fred Cleator continued his planning for alpine highways and trails, and in the Willamette National Forest, Supervisor Pat Thompson, who thought not enough emphasis was placed on recreational planning, hired the Willamette's first recreation officer in the person of William Parke. [42] Parke, from that time on, acted as the forest's resident recreational planner.

The Civilian Conservation Corps provided the manpower to put Parke's plans into action. Parke and Thompson provided that 25 percent of the work of the CCC be expended in recreational facilities. This meant a vast increase in the number of campgrounds and increased facilities for their uses—campground shelters, garbage pits, toilets, tables, chairs, and the like. They built many miles of trails, and enabled the Forest Service to keep up with demands for recreational facilities, and to plan for increased use in the future.

The period was marked also by changing patterns in recreational use. The early recreational uses of the forest—hunting, fishing and camping, berry picking, photography—continued. Automobile camping increased; use of horses, except in the back country, declined. Mountain climbing increased; the customary Oregon groups who engaged in climbing—Mazamas, Obsidians, and Chemeketans—were increasingly joined by Californians who "discovered" these new peaks. But the thirties brought in a new interest in winter sports, especially skiing, and the Forest Service began to plan for year round recreation rather than for only spring, summer, and fall.

The Oregon Skyline Trail, established in 1920, proved to be increasingly popular. In 1934 William L Boyer made a reconnaissance of the trail and issued a detailed report. This included recommendations on relocation of hazardous or inconvenient stream fords; alternative routes over portions of the trail, evaluation of campsites and stock feed, and recommendations for building of shelters, latrines, and garbage pits; and recommendations on trail signs and maps. Much of the work recommended was carried out with CCC help. [43]

Work on a continuation of the Skyline Trail along the crest of the Cascade Range in Washington State was carried on during the 1930s. The Forest Service desired to continue the trail to the south in Region 5 (California), where already the John Muir Trail had been built in the central Sierra Nevada. However, S.B. Snow, Regional Forester for Region 5, dug in his heels. The Pacific Crest (Skyline) Trail in California, he wrote, was pretty much a myth. The northern part of Region 5 was simply too cut up with roads to make a good trail into desert and brush. Both the Sierra Club and the Federation of Western Outdoor Clubs had no interest in such a trail and had withdrawn from the Pacific Crest Trail Conference. Forester Lyle Watts wrote to say that the Skyline Trail literature need not mention Region 5. The general view of Region 5 was that it was

"laying down" too fast. This episode seems something of an anomaly in view of present day California interest in the Oregon mountain lands and their management. [44]

As it has been noted, Fred Cleator favored the building of shelters on the Skyline Trail. A tragedy and the presence of the CCC labor helped to implement this program. In 1927 two young men were lost in a snowstorm while attempting to climb North or Middle Sister. Searchers had to hike in from Frog Camp, since there was no developed base camp near Three Sisters from which to begin the search. Their bodies were not found until the spring of 1928. The Obsidians approached Supervisor Thompson to have a shelter built at the base of the Three Sisters. When the CCC program was started in the spring of 1933, Supervisor Thompson directed Bill Parke to locate a site for such a shelter (to be called the Sunshine Shelter) and to build it. (The shelter was removed in 1972 because heavy use of the shelter was damaging the area.) With relief labor, the Forest Service decided to build a series of shelters along the trail. These were small, simple, open front affairs, built of whatever wood was available and roofed with shakes produced at one of the CCC camps. Such shelters were built at Mink Lake, Irish Lake, Charlton Lake, and South Waldo Lake. Other shelters of a similar type were built on the main trails for the convenience of trail workers and packers. [45]

The thirties also saw new developments in Region 6 recreational facilities. Beginning in 1928, skiing enthusiasts began to urge the Forest Service to establish public skiing areas. Such developments to that date had been private, consisting of the use of private lodges and cabins as headquarters for skiers. In 1928 the Forest Service made a series of studies of the Region, working with sports clubs from the Hood River and Portland areas. In 1935 construction of Timberline Lodge was authorized. The structure was mainly built with Works Progress Administration (WPA) labor and Mt. Hood rapidly became a national center for skiing activities. [46]

To the south, skiing became increasingly popular. The Obsidian Club became interested and a subsidiary group formed the Ski-Laufer Club. Weekend excursions were made by rail to Willamette Pass, by automobile to McKenzie Pass and Santiam Pass. In Eugene people felt that ski lodges and ski runs might be built with work-relief labor, and advisory groups of citizens with some Forest Service members, were established to look over possible locations.

The first two ski runs built by CCC labor were failures since they were in the wrong places. At White Branch, off the McKenzie Highway, a two-story lodge, cabins, and water and sanitation systems were set up, a ski run cleared from the second growth forest, and an access road built. Unfortunately it was at the 3,000 foot elevation, too low to acquire the snow depth needed for a long winter season. A second facility was built near McKenzie Summit at Hand Lake. This was a less elaborate structure consisting of a warming cabin, a ski run, and an access road. However, the Oregon State Highway Department did not keep McKenzie Pass open all year, so this project, too, was abandoned.

The completion of the Santiam Pass road in 1939 turned attention to that area. In March 1938, a group met a Fish Lake to study its possibilities. The first snowmobile in Lane County was used to transport equipment and people around the area. In addition to Forest Service personnel, members of the Obsidian and Ski-Laufer Clubs, the Chemeketans Club, the Santiam Fish and

Game Association, and the Lions and Civic Clubs of Eugene were present. They decided on the Three Fingered Jack area, and plans were made to build a ski run and facilities near the top of the pass. A rival area, Hoodoo Butte, was also considered, and a special use permit granted to Edward Thurston to develop that area. The Forest Service, meantime, constructed Santiam Ski Lodge with CCC labor. It was built of timber cut from the neighboring forest and of the lava rock, and had bunks for 60 people, a large fireplace, kitchen and dining room, and a store. The lodge was operated under a special use permit.

Some skiing had been developed in the Odell and Crescent Lake area, accessible by rail, and after 1940 by the Willamette Highway. The Forest Service made on-the-ground studies there in April 1939; again, the Obsidian and Ski-Laufer Clubs were represented, together with residents of Crescent Lake and Odell Lake. They developed a downhill ski site, but building of facilities was delayed because of the outbreak of the war. Some of the land for the ski run was cleared by timber sales and logging operations, as well as by volunteer labor from the Obsidian and Ski-Laufer Clubs. By 1944 the area was set in operation with a rope lift and a snack bar, and a permit issued to Roy Temple. [47]

One unique structure built in the high country was the Dee Wright Observatory, a tribute to one of the unsung workers of the Service, the packer. Horse and mule transport were universal in the early days of the Service, and an honor roll of packers could be compiled of these people who got supplies to camps, carried in fire fighting equipment, stocked mountain lakes with fish, and became legendary story tellers. Dee Wright was one of these men. He joined the Forest Service about 1910 working first in the Mount Hood National Forest and later in the Willamette. A short, stocky man with sparkling eyes, he pioneered many trails in the high country, packed lookout structures up mountains all the way from Mt. Hood to Willamette Pass, and enthralled the CCC boys with his stories. In 1917, while on the Mt. Hood, he was kicked in the chest by his favorite mule "Dynamite." A heart attack took his life in 1934 while he was rowing a group of CCC men across the McKenzie River.

In 1926 Supervisor Macduff and Ranger Smith Taylor conceived the idea of establishing an observation point on the lava beds near McKenzie Pass, at a place from which all the major peaks were visible. They cleared off a small platform and placed a porcelain disk with pointer as a "peak finder." William Parke conceived the idea of elaborating the structure, and under his direction a turret shaped observatory was erected with CCC labor. It has walls two feet thick made of the native lava rock, gothic windows, and small openings which point to the various peaks, and a bronze peak finder on the roof. [48]

In the 1930s and 1940s a transportation network was completed linking all parts of the forest. This included the Santiam and the Willamette Highways linking eastern and western Oregon. Cleator's dream of a skyline highway paralleling the Oregon Skyline Trail was not realized as a unit. However its equivalent was produced by completing gaps which had existed in the north-south network of roads. This included a road link connecting Breitenbush and Detroit with Estacada; closing the gap between Detroit and Little Nash Crater on the new North Santiam Highway; building the link between Clear Lake and Belknap Springs (referred to as the "Clear Lake Cutoff"); and building a road from the McKenzie Highway southward up the South Fork of the McKenzie River to Oakridge. [49]

Standards established earlier, and described in the previous chapter, for preserving roadside beauty were continued. On the Willamette Highway no timber sales were permitted within 500 feet of the right-of-way unless approved by the Regional Forester. Such cutting was to be for sanative purposes only, and was to be selective. In the Rigdon area, where some of the land was held in a checkerboard pattern by Pope and Talbot, the company agreed to abide by Forest Service regulations regarding roadside and streamside scenic values. These included "careful road location and logging on their own lands," and preserving waterside and roadside vegetation on each side of the main road and on the tributaries of the Willamette River "regardless of land ownership." On both the tributaries and on the main river, 200 feet were to be left untouched. [50]

On the South Santiam Highway an organization camp was set up at Longbow. Upper Soda already had a large complex of resorts and summer homes. As in the Willamette Highway area, protection was given to roadsides and streamsides. In the Hoodoo Ski Area a shelter and springhouse were built, as well as an organization building for outdoor clubs. [51]

As has been mentioned, Supervisor Thompson hired William Parke as a recreation planner. Parke was a 1932 graduate from the school of forestry, Oregon State College, and had enrolled in the University of Oregon to take graduate work in the school of landscape architecture. Parke was hired to survey and prepare site plans for campgrounds, picnic areas, organization camps, summer homes, ranger stations, and guard stations using CCC labor to build them. Thompson also made the important decision that 25 percent of each camp's work force be used for recreational projects.

For efficiency in getting the projects under way, Thompson asked Parke to set up a training program for CCC foremen so they could better direct the recreational work. The first such session was held at the Belknap CCC camp. Each foreman was given plans for building pit toilets, garbage pits, tables, benches, fireplaces, entrance portals, and the like. A site plan was prepared for Horse Creek and each foreman took a few CCC enrollees from Belknap and set them to work. Within two weeks the site was completed. From then on each CCC camp split cedar shakes, whipsawed logs into boards, and gathered other material which was stockpiled at Belknap. Sheds were built so work could be carried on in inclement weather. During the CCC period, over 80 campgrounds, picnic sites, winter sports areas, organization camps, and observation points were built with the aid of CCC labor. In addition, new ranger stations and guard stations were built and landscaped to provide a pleasing appearance to the public. [52]

RELIEF WORK—THE CIVILIAN CONSERVATION CORPS

The Civilian Conservation Corps was one of the major accomplishments of the New Deal. During the closing days of the Hoover administration some limited funds had been made available for putting men to work on conservation projects, largely related to road and trail work. President Roosevelt called for a full-scale use of manpower in work relief to conserve, protect, and renew natural resources. The Emergency Conservation Work Act was passed on March 31, 1933. Roosevelt used the term "Civilian Conservation Corps" for this work and the term gained currency. The act was extended by Congress and in 1937 was supplemented by formal establishment of the Civilian Conservation Corps name.

The CCC program was administered by resource agencies in the Departments of Agriculture and Interior. The Department of Labor did the recruiting, the War Department operated the camps and ran the educational program, and the resource agencies carried on the field activities. Enrollment for six-month periods was open to young men 18-23 years of age. Pay was $30 per month, of which $25 was sent to the parents. Foremen were largely local men, often loggers or Forest Service retirees.

The CCC was the most important work relief program in the Willamette. Other programs played some part, including the Federal Emergency Relief Administration of 1933, designed to give work/relief to adult men.

The program proved to be highly successful, and is generally regarded as one of the most satisfactory of the New Deal programs. It achieved its basic goal of relieving unemployment; it gave three million young men a new start in life, and a new outlook; and it achieved its main objective of conserving and renewing natural resources. Many career officers of the Army, slow to gain promotion and out of public favor because of the isolationist temper of the times, found the work challenging and brought good professional judgement to bear on the project. To the Forest Service, it offered a challenge and an opportunity. From the establishment of the Forest Service, the policy had been for the organization to choose its own personnel on the basis of merit. The CCC enrollees, however, were chosen by an outside agency on criteria other than merit; they were untrained, unskilled, and without basic education, yet they were willing and able to work if given the opportunity. The Forest Service was given the task of training and working with possibly refractory human material. On the other hand, it gave the Forest Service the manpower needed to complete its assigned tasks.

Regional Forester C.J. Buck, in a letter to his Forest Supervisors, dealt with many of these things. The program, he wrote, would alleviate "the social devastation of unemployment." The manpower would enable the Forest Service to complete its development work, give the Service a fire fighting force, and a planting crew. [53]

Directives for the CCC stressed their role in forest development. The words "locate," "identify," "protect," and "enhance" were frequently used in these directives. Their objective was not only to take care of present needs but also to plan for the future. In construction of buildings, they were to use wood to the greatest extent possible. In administration, the Washington Office issued improvement handbooks on the use of wood; the Regional Office set up site plans and landscaping standards; the national forests prepared site recommendations and selected places for recreation and other developments. There was, as in most Forest Service work, a great deal of overlapping of functions rather than tight military chain of command planning. Officials from the Washington Office visited the Northwest and adapted plans prepared in the office to the realities of the field; Cleator and Horton of the Regional Office worked closely with Thompson and Parke in planning in the Willamette National Forest. [54]

The CCC housing in Oregon—and indeed in all areas except Alaska, Puerto Rico, and on Indian reservations—was based on 200-man camps (there were no women camps). The camps were composed of long barracks used as sleeping quarters, latrines and wash sheds, cook shacks, and other buildings used for work shops, recreation, or education. In the Willamette National Forest

four major camps and eight side camps—smaller camps, built for special projects—were built. The main camps were Belknap, located at the site of the present McKenzie Ranger Station; Oakridge, located at the site of the Pope and Talbot mill; Fall Creek, near Lowell, close to the Fall Creek Reservoir and Cascadia, at the junction of Canyon Creek and the Santiam River. In 1938 this camp was moved to a site near Idanha. Side camps included one near Quartzville; one at Rigdon on the site of the old Ranger Station some 22 miles south of Oakridge; one at Fish Lake; one on Humbug Creek, near Breitenbush; one on Seven Mile Hill; another at Snow Creek; and one at Bear Pass. In addition to these, workers on trail crews lived in tents or occupied Adirondack shelters built by the Forest Service. [55]

The CCC enrollees in the Willamette National Forest were largely young men of rural origins, mainly from the midwest or from Oregon. To judge from the records, there was much less difficulty in training these crews to work than in some of the CCC camps on other forests, where enrollees came from cities and did not know one end of an axe from the other, or from Appalachia, where their mores and manners resulted in cultural shock to the Northwesterners. The Willamette enrollees were a hard-working, well-behaved group, interested in new experiences—panning for gold in the Quartzville area, fishing, listening to tall tales told by Dee Wright or other old-timers, and enjoying the outdoor life.

The forest communities readily accepted the relief workers, and they played an active part in community affairs. Records show the formation of bowling teams, baseball teams, basketball teams, pinochle and bridge clubs, and the like. Baseball teams competed against town teams. Dances in Oakridge, Detroit, and Westfir were attended by CCC boys. CCC enrollees joined town fire departments in putting out fires, assisted in rescue work and searches for lost children. School teachers and foresters gave lectures in CCC camps on a variety of subjects, many related to conservation and the history of forestry. There was a strong community sense in the towns at that time, and the work/relief people became part of the communities.

The CCC camps had educational activities as part of their program, and a great deal of instruction was carried on. A large part of the education, of course, was on-the-job vocational training, carried on as part of the work. Camp fire meetings with programs and lectures were popular, and some formal classes, some with university men on vacation serving as lecturers, were presented. Residents of communities supplied games, magazines, and books for the camps. [56] High school instruction was carried on for those who did not have high school diplomas.

A tremendous amount of work was done by CCC enrollees. In the Detroit Ranger District some of the earliest work was snag falling. Local men worked a six-hour day, 30 hours a week, at wages averaging $2.44 par day, working from January 1, 1933, until early May of that year; 22,095 snags were felled, at a cost for wages of $5,974, and a total cost of $7,657.45. This snag falling proved its value a few years later when it prevented a fire in the Breitenbush area from spreading. [57]

The CCC program stressed working with wood; and Belknap became a center for such work. A "Chinese saw"—that is a whipsaw—was built and logs were sawed into planks. Planks were smoothed with a sharp double bitted axe, and then with a regular plane. Benches, tables, and chairs were built using patterns from a book on furniture-making prepared for the Forest Service,

and these pieces were transported to campgrounds or used to furnish guard stations or CCC barracks. Shakes were split with froes for roofing shelters in the campgrounds. Privies of the style immortalized by Chic Sale in *The Specialist*, were constructed for campgrounds. Experienced local men trained in carpentry and masonry helped the CCC men to construct ranger stations, garages, and storage shelters. Many of these structures still stand, a tribute to the strength of their basic design.

Buildings in the areas, and their grounds, were improved in appearance by landscaping, the building of stone walls, and planting of trees and flowering shrubs. Campgrounds were improved with privies, tables, benches, communal shelters, fireplaces, garbage pits, and the like. The additions of new campgrounds and the facilities took care of the vast postwar influx of visitors until the 1960s.

CCC labor was used for road work. The Forest Service at that time had few bulldozers so CCC labor was mostly hand work. It involved mainly pick and shovel work, and some skilled CCC workers were used to blast rocks, while others operated dump trucks. The CCC labor enabled the Service to complete a vast road building program. The workers also built structures connected with fire control which increased the number of lookout buildings on the forest. Thirty-seven lookouts were built on previously unoccupied peaks, and nearly all of the old lookouts were improved or rebuilt. Trails and telephone lines were improved and, as has been mentioned, the CCC men proved to be good fire fighting crews. The combination of vigilance and manpower, together with favorable weather, was a major factor in the fact that there were few large fires in the Willamette during this period. [58]

The CCC program and other work/relief programs were phased out with the outbreak of war. They left behind an important legacy.

WORLD WAR II

The war brought about the final process in "Taming a Wild Forest." The resources of the forest, particularly the timber resources, were called up to help the war effort. The number of timber sales went up from 85 in 1940 to 160 in 1944; volume cut increased from 44,511,000 board feet in 1940 to 144,818,000 in 1944; the price per thousand board feet rose from $1.90 in 1940 to $4.02 in 1944; and the total value of timber sales from $84,757 in 1940 to $582,455 in 1944 (see Appendix). [59] The demand for lumber continued after the war; the price of lumber remained high, and for 15 years there was a general period of prosperity for the industry.

Productivity was aided by both prosperity and technology. Power saws, eyed with suspicion in 1940, were used universally by 1945. Bulldozers, power wagons, jeeps, and huge logging trucks aided in getting the logs out of the woods. There was far less waste in producing lumber. This came about with the utilization of less select lumber, and of species previously little used, such as white fir; plywood production, which could utilize inferior logs; and more utilization of waste products such as sawdust. There was an increase in the number of small sales. A small operator with a tractor and bulldozer, a portable loading rig, and power saws could set up a business for himself.

As in World War I, many Forest Service men were called to the armed services. The shortage was met by volunteers. The call went out in state and Federal governmental publications and in the newspapers for volunteers. The *Oregonian* for March 22, 1942, carried headlines reading "On the Vast Wilderness Tract Foresters Are on the Lookout for Bombs and Enemy Fire Bugs," and L.F. Kneipp of the Washington Office told of the need for lookouts to work with state and Federal foresters, and for 40-person fire crews to be taught the one-lick method. Reservists between the ages of 18 and 60—the lower age later dropped to 16—were called upon to apply for work. Outdoor clubs like the Mazamas, called on their members to use vacation time working for the Forest Service or state forestry. Such volunteers in 1943 staffed 32 fire stations in the Mt. Hood National Forest and one in the Siuslaw National Forest. [60] In the Willamette, Jump Off Joe was taken care of by the employees of the local power company, while Battleaxe in the Detroit District was staffed by members of the Chemeketan Hiking Club. Camps for conscientious objectors were established: No. 21 Cascade Locks (Mt. Hood NF), No. 56 Waldport (Siuslaw NF), and No. 59 Elkton (O&C Revested Lands Administration in Douglas County). The Willamette, with others in the northwest, was able to carry on through the fire season with this help. [61]

In national defense, the Forest Service was mobilized. Fear of incendiarism first centered on the possible use of phosphorous which the IWW had used with deadly effect in eastern Washington during World War I. But there was a major fear of air raids; and these fears were realized when in 1942 a plane from a Japanese submarine dropped an incendiary bomb near Brookings. Later, fire balloons were sent over—paper balloons with explosive and incendiary devices attached—designed to be carried from Japan on the high air currents. [62] When the war began there was no coast radar so Aircraft Warning Stations were established along the West Coast. Staffed 24-hours a day, these stations reported to a central filter center, by phone or radio, all aircraft passing within sight or hearing distance. This network was established early in 1942. There was need for such stations in the national forests, so some lookout stations were winterized for this use. Observers—usually husband and wife teams in order to avoid cabin fever—kept 24-hour watch in shifts, seven days a week. They reported by phone or the portable radios that the Forest Service had developed. In the Willamette, such stations were established on Gold Hill, Gold Point, and Hardesty Mountain. The posts were phased out in 1944 when the coast radar was established. [63]

NOTES—CHAPTER IV

1 Clawson and Held, *The Federal Lands*, 34-35.

2 *Six Twenty-Six*, 19:2 (1925), 54.

3 Bruckart File, WNF/H; Bruckart File, USDA Forest Service Pacific Northwest Region, Portland.

4 John B. Smith to Joe Elliot, March 23, 1980, Bruckart File, WNF/H.

5 *Six Twenty-Six*, 23:3 (March, 1939), 3-4.

6 *Six Twenty-Six*, 23:4 (April, 1939), 4-5.

7 Henry Clepper, *Leaders in American Conservation,* 201.

8 A good survey of these developments is to be found in McKinley, *Uncle Sam,* 298-303.

9 Detroit Ranger District and Sweet Home Ranger District files; History notes of the Lowell District; Ray Engles Interview, all in WNF/H.

10 William F. Cummins, "Recollections of the Oakridge Ranger District," WNF/H.

11 Good discussion of sustained yield are found in Rodney C. Loehr (ed) *Forests for the Future: The Story of Sustained Yield as Told in the Diaries and Papers of David T. Mason* (St. Paul, Minn., 1952).

12 Alex Brandstrom, *Development of Industrial Forestry in the Pacific Northwest* (Colonel William G. Greeley Lectures in Industrial Forestry No. 1: Seattle, University of Washington School of Forestry, 1957); Clepper, *Professional Forestry*, 197-212, 269-286.

13 Loehr, *Forest for the Future,* 197-199, 203, 215-216; Sweet Home File, WNF/H.

14 Dana, *Forest and Range Policy,* 284-285, 302-303.

15 Sweet Home File, WNF/H.

16 McKinley, *Uncle Sam,* 298-303; *Six Twenty-Six,* 25:11 (1941), 4-5; 25:8 (1941) 18-19; James A. Young and Jerry D. Budy, "Adaptation of Tracklaying Tractors for Forest Road and Trail Construction," *Journal of Forest History,* 31:3 (1987), 122-132.

17 Clepper, *Professional Forestry*, 166-177; Gary Cravey Gray, *Radio For the Fireline* (Washington, 1982), 141-147.

18 John H. Woods, "Blitz Over the Cascades," *American Forests,* 48:1 (1942), 15-19, 47; Stewart H. Holbrook, "The Forest Goes to War," *American Forests,* 48:2 (1942), 55-62; *Six Twenty-Six*, 20:5 (1936), 29.

19 Cummins, Recollections, WNF/H.

20 N.S. Perkins, "The Douglas Fir Plyboard Industry," *American Forests*, 48:3 (1942), 116-122; *Six Twenty-Six*, 25:2 (1941), 24-25.

21 Alex Brandstrom, *Industrial Forestry;* Thornton T. Munger, *Forest Research in the Northwest,* 121-132, 177.

22 Thornton Munger, *Forest Research in the Northwest,* 42-47. Pictures, pages 41 and 43, show Munger at work in 1910.

23 McKinley, *Uncle Sam*, summarizes these developments. Specialized articles on the "one-lick" method include George H. Schroeder, "The Progressive Methods of Forest Fire Control," *Journal of Forestry*, 40:1 (1942), 11-14, and Robert N. McIntyre, "The Variable-Lick Method—An Approach to Greater Efficiency in the Construction of the Fire Control Line," *Journal of Forestry*, 40:7 (1942), 609-614. Snag falling benefits are described in John H. Woods, "Blitz Over the Cascades," *American Forests*, 48:1 (1942)15-18, 41, described the Tumble Creek fire. There is a voluminous file of lookouts and fires at the Oakridge Ranger Station, Westfir.

24 Stewart H. Holbrook, *Far Country* (New York, 1952), 53-70,145-159, tells of some of these places.

25 Alex Lindh and C.B. McFarland, "Report on Oakridge Recreational and Industrial Land Unit, Cascade National Forest, March 25, 1933," WNF/H.

26 Edgar B. Nixon (ed.) *Franklin D. Roosevelt and Conservation* (Hyde Park, 1957), I, 257-258, 419. On the Resettlement Administration, see a good account of its work and philosophy in Joseph Kinsey Howard, *Montana: High, Wide and Handsome* (New Haven, 1943), 303-305.

27 C.J. Buck to the Forester, April 19, 1935, WNF/H.

28 "Preliminary Report on the Proposed Oakridge Forest Community," May 27, 1935," WNF/H.

29 Nixon, *Franklin D. Roosevelt*, I, 419; Earl S. Pierce to C.J. Buck, September 24, 1935, WNF/H.

30 "Preliminary Report on Proposed Oakridge Forest Community," Robert W. Putnam, dated May 29, 1935, WNF/H; "Report of Dependent Settlement: Oakridge - Westfir Community, Willamette N.F.," by John P. Hongly, approved by J.R. Bruckart, dated November 8, 1938, WNF/H; for information about the Industrial Employees Union (I.E.U.), a new name for the old Loyal Legion of Loggers and Lumbermen (4L) "union" of employers and employees, see Vernon H. Jensen, *Lumber and Labor* (New York, 1935), 209, 227-228.

31 *Six Twenty-Six*, 25:10 (1941), 18-19.

32 *Six Twenty-Six*, 25:1 (1941), 17.

33 *Six Twenty-Six*, 25:1 (1941), 4-5; 25:10 (1941), 28; 26:2 (1942), 19-20.

34 James B. Trefethen, *An American Crusade for Wildlife* (New York, 1975), 228-229, 238-239.

35 *Six Twenty-Six*, 20:2 (1936), 19.

36 *Six Twenty-Six*, 17:1 (1933), 10; H.C. Rooper to Nelson Macduff, December 15, 1921, Rooper Ranch File, Grazing, WNF/H; Grazing Permit Plan, Willamette National Forest (ca. 1934).

37 1937 Grazing File, Willamette NF, WNF/H; Memo, January 5, 1960, to Supervisor from District Ranger, Grazing File.

38 The decline can be followed in the H.C. Rooper file, Rooper had grazed the area since the 1880s. In 1940 he reduced his usual application for range for three bands to one band, and by 1942 he decided to keep his band at home, since it was hard to get herders. Rooper File, Grazing Records, WNF/H.

39 Grazing files, WNF/H; William F. Cummins, "Recollections"; Grazing Forest Plan, Willamette NF, 1934.

40 Robert Marshall, "The Forest for Recreation," *A National Plan for American Forestry,* 73rd Congress 1st Session, Senate Document 12; Washington, 1933, 463-525.

41 C.J. Buck, "A Forester's Work in Recreation," *OSC Annual Cruise,* 10 Corvallis, 1929. Buck, "The Place of Recreation in the Forest Program," *Journal of Forestry,* 31:2 (1933), 191-198.

42 William Parke, "Supervisor Perry Thompson," WNF/H.

43 Report by William L. Boyer, Skyline Trail, 1934, Box 14684, Portland Warehouse, USDA Forest Service Pacific Northwest Region.

44 S.B. Snow to Regional Forester, September 2, 1939; Lyle Watts to Snow, August 9, 1939, Box 14684, Portland Warehouse, USDA Forest Service Pacific Northwest Region.

45 Interview with William Parke by Gerald Williams, WNF/H; Bill Parke to Michael Kerrick, April 17, 1986.

46 Jack Grauer, *Mt. Hood: A Complete History* (Portland, 1975), 54-57, 63-72.

47 Roy Elliott, "White Magic in the Mountains," (c. 1982) Recreation File WNF/H; W.N. Parke, "Winter Sports Area Survey in the Santiam Pass Area," Eugene, 1958, Winter Recreation Sites - Ski Areas File, 2300-3, WNF/H.

48 On Wright's work on the Mt. Hood, see Grauer, *Mt. Hood,* Fred McNeil, *Wy'East* on the observatory, a good account is in the *Six Twenty-Six,* 26:4, 14.

49 The best analysis of this can be shown by comparing roads completed in 1920, 1930, and 1938 on Forest Service maps.

50 Willamette Highway Unit, Oakridge, 1940; Upper Willamette Highway Recreational Unit, West of Oakridge, McFarland, 1939; Rigdon Recreational Unit, March 22, 1949, Bruckart, WNF/H.

51 Report on Santiam Highway, Recreation Plan by J.R. Bruckart, March 7, 1940, WNF/H.

52 Bill Parke, "Supervisor Perry Thompson," WNF/H.

53 C.J. Buck to Supervisor, July 17, 1933, USDA Forest Service Pacific Northwest Region, FY 1933-1934, Box 57691, Federal Records Center, Seattle.

54 John A. Salmond, *"Roosevelt's Tree Army": A History of the Civilian Conservation Corps* (Durham, NC, 1964); Alison T. Otis, William D. Honey, Thomas C. Hogg, and Kimberly K Lakin, *The Forest Service and the Civilian Conservation Corps: 1933-42* (Washington, 1986) FS-395 for the Forest Service; Elizabeth Gail Throop, "Utterly Visionary and Chimerical: A Federal Response to the Depression," M.A. Thesis, Portland State University, 1979, 28-32; and Gerald W. Williams, "The Civilian Conservation Corps' (CCC) Contribution to the Forests in the Pacific Northwest," in Harold K Steen (ed) *History of Sustained-Yield Forestry: A Symposium* (Santa Cruz, 1984).

55 Gale Burwell to Donald Hobart, Permanent CCC Camps, WNF/H.

56 Jon Silvermoon, *Cultural Resource Inventory and Mitigation Report for the McKenzie Ranger Station Site Development Project and the Belknap Civilian Conservation Corps Camp, Willamette National Forest, 1984,* has a wealth of material.

57 *Six Twenty-Six,* 17:12 (1933), 16.

58 Silvermoon, *Cultural Resource; Six Twenty-Six,* 18:4 (1934), 20; 18:5, 15-16; 18:8, 20; 18:9, 16-17, Data on lookouts was obtained from Ron Johnson, Oakridge Ranger Station, Westfir.

59 Timber Sale Business, Willamette National Forest, 1940-1949," WNF/H.

60 Representative material is found in Fred McNeil, "Forest Service Reserves," *Keep Oregon Green Quarterly,* November, 1943, 9; *Forest Log,* 3 (October, 1943), 8; *Eyes Aloft,* 2:7, July, 1943,12; *Cottage Grove Sentinel,* March 26, 1942; *Oregon Journal,* July 22, 1942; *Mazama,* 24:12 (December, 1942).

61 Jump Off Joe File; Detroit File, WNF/H; Blue River File, WNF/H.

62 Bert Webber, *Retaliation: Japanese Attacks and Allied Counter Measures on the Pacific Coast in World War II* (Corvallis, 1976) is an excellent summary; regarding conscientious objector camps in Oregon, see William Everson, "Waldport: An Interview with William Everson," *Imprint: Oregon,* 5:1-2 (Fall-Spring), 1-41.

63 Material furnished by Ron Johnson, Oakridge Ranger Station, Westfir.

CHRONOLOGICAL SUMMARY, 1933-1944

1933

Franklin Delano Roosevelt took office as President on March 20, 1933. The "New Deal" era began.

A "National Plan for American Forestry," known as the "Copeland Report," was submitted to the Senate on March 27 by the Secretary of Agriculture. It made two main recommendations: A large extension of public ownership and more intensive management of all publicly owned lands.

The Act of March 31 (48 Stat. 22) appropriated funds for the dual purpose of relieving unemployment and promoting conservation of natural resources. In addition to other activities it authorized use of the funds for forest research and for acquisition of land by purchase, donation, condemnation, or otherwise. Executive Order of April 5 established the Office of Emergency Conservation Work (ECW) as an independent agency, which was popularly known as the Civilian Conservation Corps.

The Federal Emergency Relief Act (FERA) of May 12 (48 Stat. 55), and subsequent amendments, provided funds for the relief of unemployment which were used in part for forestry and other conservation activities.

The National Industrial Recovery Act (NIRA) of June 16 (48 Stat. 195) attempted to promote economic recovery by a wide variety of measures, including codes of fair competition, an extensive public-works program, and subsistence homesteads. The Code of Fair Competition for the Lumber and Timber Products Industries, approved August 21, led to the adoption (March 23, 1934) of a Forest Conservation Code which required for various divisions of the industry to formulate and enforce rules of forest practice.

Chief Robert Y. Stuart died October 23rd, and was succeeded by Ferdinand A. Silcox on November 15, 1933.

1934

The National Forest Refuge Act of March 10, 1934, permitted tracts of national forests to be set aside as game refuges with state permission.

1935

The Resettlement Administration was established by Executive order of April 30. In 1936 it was transferred to the Department of Agriculture, and in 1937 it was changed to the Farm Security Administration.

1936

The Flood Control Act of June 22 (49 Stat. 1570) recognized the fact that flood control on navigable waters or their tributaries is a proper activity of the Federal government, in cooperation with the states and their political subdivisions. It provided that thereafter Federal investigations and improvement would be under the jurisdiction of the War Department, and Federal investigations of watersheds and measures for runoff and water-flow retardation and

soil-erosion prevention on watersheds under the jurisdiction of the Department of Agriculture. The act authorized interstate flood-control compacts and authorized a long list of projects for prosecution by the Army Engineers.

Amendments in 1937 (50 Stat. 876) and 1938 (52 Stat. 1215) authorized additional surveys and examinations at specific localities and directed the Secretary of Agriculture to make runoff and erosion surveys on all watersheds specified for flood-control surveys by the Secretary of War. The 1937 act also authorized the Secretary of Agriculture to impose such conditions as he might deem necessary in prosecuting measures for retarding runoff and preventing erosion on non-Federal lands.

1937

An "upstream engineering" conference called by President Roosevelt was held in Washington, September 22 to 23, to emphasize the importance of this phase of flood and erosion control.

The Act of June 28 (50 Stat. 319) established the Civilian Conservation Corps as the official successor to the Emergency Conservation Work; provided in detail for its administration; authorized the use of ten hours a week for educational and vocational training on a voluntary basis; and extended its life to June 30, 1940. In 1939 (53 Stat. 1253), the CCC was continued through June 30, 1943. Subsequent acts extended its life through June 30, 1944.

1938

The Concurrent Resolution of June 14 (52 Stat. 1452) created a Joint Congressional Committee on Forestry to study the present and prospective situation with respect to the forest land of the United States and to make a report and recommendations by April 1, 1939. The time limit was later extended to April 1, 1941. The report was presented March 24, 1941.

1939

The Reorganization Plan No. 11 of July 1, 1939, was a Presidential Order to combine the Bureau of Fisheries (Department of Commerce) and the Bureau of Biological Survey (Department of Agriculture) as the Fish and Wildlife Service (Department of the Interior).

Ferdinand A. Silcox, Chief of the Forest Service, died on December 20. Earle H. Clapp served as Acting Forester until 1943.

C.J. Buck transferred to the Washington Office. Replaced by Lyle F. Watts.

1940

The Lea Act of April 26 (54 Stat. 168) provided for Federal cooperation in the protection of forest lands from white pine blister rust, irrespective of ownership, provided that on state or private lands. Federal expenditures must be at least matched by state or local authorities or by individuals or organizations.

The "Domestic Water Supply" Act of May 28 (54 Stat. 224) authorized the President, on the basis of a cooperative agreement between the Secretary of Agriculture and the municipality concerned, to withdraw national forest lands from which a municipality obtains its water supply from all forms of location, entry, or appropriation. The Secretary of Agriculture may prescribe such rules and regulations as necessary for adequate protection of the watershed.

The Fish and Wildlife Service (F&WS) was established in the Department of the Interior on June 30th under Ira Gabrielson. F&WS came from the combination of the Bureaus of Fisheries (USOC) and Biological Survey (USDA).

1942-1943

The Acts of July 2, 1942 (56 Stat. 562, 569) and July 12, 1943 (57 Stat. 494, 499) provided for liquidation of the C.C.C. as quickly as possible but not later than June 30, 1944. Liquidation of most of the personnel was accomplished by August 15, 1942.

1943

Lyle F. Watts was appointed Chief of the Forest Service on January 8th. Horace "Hoss" J. Andrews replaced Watts as Regional Forester.

1944

The Sustained-Yield Forest Management Act of March 29 (58 Stat. 132) authorized the Secretary of Agriculture and/or the Secretary of the Interior to establish cooperative sustained-yield units consisting of Federal forest land and private forest land or Federal sustained-yield units consisting only of Federal forest land, when in their judgement the maintenance of stable communities is primarily dependent upon Federal stumpage and when such maintenance cannot be secured through usual timber-sale procedures. Provision is made for the sale of Federal stumpage to cooperating landowners or to responsible purchasers within communities dependent on Federal stumpage, without competitive bidding at prices not less than the appraised value of the timber.

The Act of May 5 (58 Stat. 216) amended the Clarke-McNary Act of 1924 by authorizing annual increases in the appropriation for cooperative forest-fire protection with the states and for studies of tax laws and forest-fire insurance up to a maximum of nine million dollars for the fiscal year 1948 and thereafter.

The Act of May 31 (58 Stat. 265) authorized an annual appropriation of $750,000 to complete the initial survey of forest resources inaugurated by the McSweeney-McNary Act of 1928, with the stipulation that total appropriations for this purpose should not exceed $6,500,000. An additional appropriation of $250,000 annually was authorized to keep the survey current.

Chapter V
ERA OF INTENSIVE FORESTRY, 1945-1970

INTRODUCTION

Marion Clawson divided land use history in the post war period into two eras. First came the era of intensive management, lasting from near the end of the war into the 1960s. This was a time in which the land was made more productive by larger expenditures for labor and capital. Federal land areas were relatively fixed (except in Alaska) but more money was invested in them. These developments included roads, dams, and especially recreational facilities; land improvement in timber; and increased services to the public, particularly in recreation. All this required a greater expenditure of money, but also increased revenue. The first year in many in which the national forests' revenues were more than the expenditures was in 1951. This surplus lasted into the 1960s. Timber production, four billion board feet in 1950, went up to nine billion in 1960 (see Appendix). Recreational visits grew from three to ninety billion. Game forage increased 50 percent. [1]

On the national level, it was a period of general prosperity. Lyle F. Watts, Chief of the Forest Service from 1943-1952, saw the transition from the war years to the beginnings of the intense development activities in the national forests after the war. Richard E. McArdle, Chief from 1952 to 1962, was ideally suited by temperament and training to preside over this portion of the transition to multiple-use management. An able administrator—Arthur Greeley considered him to be the best the Forest Service had—McArdle was able to conciliate factional strife and to work with legislators. Edward P. Cliff, Chief from 1962-1972, had similar qualities.

Clawson's second era began—or rather super-imposed itself on the previous era—in the 1960s. It was an era of confrontation and consultation. The period was marked by the passage of a variety of new laws reflecting both the tendency to look to the Federal government as the means of solving problems, and the passing of laws as social and political protest. In these laws there was a tendency to substitute Congressional or judicial oversight for administrative discretion, so the forest officer had both more complex problems and less discretion and individual authority to solve them. There were both an increase in the general public, and more difficult guild or interest groups to deal with. In general, the post-war generation was more affluent, better traveled, and better educated than its predecessors, and consequently less deferential to forest officers and less likely to accept expertise. In addition the population was becoming increasingly urbanized. Such people were likely to have their sole real contact with the land in the field of recreation, and have difficulty in understanding the viewpoints of both forest-based industries and of woods workers. Added to this was the growth of activist groups, some seeking relief from real or imagined grievances by court action, some by lobbying, others by direct action; foundations which provided funds for test cases in environmental law; and an activist judiciary often more interested in establishing precedents than *stare decisis.* [2]

Supervisor Michael A. Kerrick, who served in the Willamette National Forest over a period of nearly 30 years, saw the era from that perspective. The fifties, he said, were the years of confidence, when we "had our laws and manuals rapidly converting the forests; we knew what

we had to do; we were experts in doing it. The public, for whatever reason, had not got involved. It was fun; we didn't have the controversies you have now—at least that is my recollection." The sixties saw the landmark legislation of the Multiple-Use Sustained-Yield Act (1960) and the Wilderness Act (1964). "The decade of the sixties, I guess, I would characterize as seeing the emergence of public concern, and emergence of concern for trying to integrate the resources." It was a period of activism also on the part of young people. [3]

Horace J. Andrews became Regional Forester in the Pacific Northwest in 1943 (see discussion in Chapter IV on his background). His tenure as Regional Forester was marked by the war effort and the post-war boom, when there was a rush to open the national forests for rapid development through increased timber sales, road construction, and truck hauling. In addition, the Sustained Yield Management Act of 1944 led to the legal agreements after the war for the Shelton Sustained Yield Unit in Washington and several Federal units in Oregon. He served until his untimely death in a car accident on March 24, 1951. Andrews was succeeded by Herb Stone.

J. Herbert Stone was born in Connecticut and a Yale Forestry School masters graduate in 1927. He had broad experience in the Forest Service from 1926-1967. His included work in the Allegheny National Forest and Forest Supervisor of the Nantahala and the Pisgah National Forests in 1933-1936. Then from 1936 to 1945, Stone was the assistant head of the division of state and private forestry and director of a wartime timber project in the North Central Region (old R-7), Director of the Central States Forest and Range Experiment Station in 1945-1946, and as Regional Forester in the Southern Region (R-8) in 1946-1951. In April 1951, Stone came became the Regional Forester for the Pacific Northwest Region. A forester's forester, he was widely admired for his professionalism and he received many awards, including the USDA Superior Service Award in 1960. Stone oversaw the Region go through a series of important Congressional actions, including the exchange of some O&C lands in the western Oregon forests with the BLM in 1956, passage of the Multiple-Use Sustained-Yield Act of 1960, the Wilderness Act of 1964, and the National Historic Preservation Act of 1966. Stone retired on June 2, 1967, and was succeeded by Charles Connaughton.

Charles A. Connaughton, a native of Idaho, graduated with a BS in forestry from the University of Idaho in 1928, then obtained a masters of forestry from Yale in 1934. He was involved with silvicultural research at the Intermountain Forest and Range Experiment Station in Ogden, Utah, then watershed research at the Rocky Mountain Station at Ft. Collins, where he became the Director in 1940. Later, he was the Director of the Southern Forest Experiment Station. He was appointed as the Regional Forester in the Southern Region in 1951 and then in the Pacific Southwest (California) Region in 1955 before being selected as Regional Forester for the Pacific Northwest Region in 1967. He had great skill in reconciling competing uses of forest land, and in working with competing groups. He was a strong advocate of multiple-use in the national forests. Near the end of his tenure, the first Roadless Area Review and Evaluation (RARE) was begun under the direction of the Wilderness Act of 1964. Connaughton served as Regional Forester until his retirement in 1971. [4]

In the Willamette National Forest, John Ray Bruckart ably managed the transition from custodial to intensive management. His last annual report on the forest, in 1953, showed his pride in his work of "taming a wild forest." He wrote of the heavy recreation use on the forest and the need

for new facilities to replace the old ones set up by the CCC; the restocking of streams with game fish; the increase in big game habitat through wise logging practices; care of the land around the new dams at Detroit and Lookout Point; the increase in timber sales, much of it in small and salvage sales; reseeding and replanting; and spraying for spruce budworm. He was the last of the old time supervisors whose skills came from the "University of Hard Knocks" rather than formal education in forestry, and who brought wisdom, shrewdness, and friendliness to the forest community. He was succeeded by Robert Aufderheide. [5]

Robert Aufderheide spent all his short life in forestry work in the Pacific Northwest. Starting as a tree planter in the Gifford Pinchot NF in 1933, he graduated in forestry from Oregon State College in 1935. He served in the Rogue River and Siuslaw National Forests before becoming the research leader in the newly established Willamette Research Center at Corvallis. He served as Supervisor of the Umpqua National Forest, 1950-1954, and then transferred to the Willamette as Supervisor in 1954. He was an ardent dry fly fisherman. During his work with the Research Center, which involved work on the H.J. Andrews Experimental Forest, he spent his spare time fishing with others involved in research—Leo Isaac, Phil Briegleb, and Albert Hall, among others. He served for only five years, dying of cancer in 1959. Aufderheide Forest Drive, demonstrating renewal of the landscape after conservative logging practices, is an appropriate monument to his ability. [6]

Aufderheide felt that one of the chief jobs of the field man was in the area of public relations. Edward Anderson, District Ranger for the Blue River Ranger District, recalled:

> ...Aufderheide met with me and said my primary job was to restore confidence in the Forest Service by people in the McKenzie River area (Because of a near tragic fire, and some alleged favoritism in timber sales), the confidence or liking of the Forest Service was at a rather low ebb. So that involved meeting with the people and many other things...We put programs in the schools so that I believe there wasn't a grade in the grade school or high school level that wasn't in touch with some forest officer during the year, anywhere from tree planting we hired weekend high school students for weekend tree planting. We adjusted our work week to to do this, to get them acquainted with the Forest Service. We took field trips, movies, show me's, and discussion with all the grades and had real good success. We were pretty well known and liked for the effort. [7]

David R. Gibney succeeded Aufderheide as Supervisor on May 3, 1959. Gibney graduated in forestry from the University of Minnesota in 1933. He first worked for the CCC as technical foreman, junior forester, and camp superintendent in Region 9, Minnesota. In December, 1941, when the Chippewa CCC was disbanded, he went to work for the Corps of Engineers. The Forest Service applied for his release from the Corps due to the need for foresters in the war effort, and he returned to the Forest Service in late 1943. Region 6 applied to Region 9 for the transfer of foresters to aid in wartime timber sale efforts, and he came to Region 6 in 1945. He served in the Gifford Pinchot National Forest as timber sales officer and later as ranger in the Packwood Ranger District. He was transferred to the Siuslaw National Forest in 1952, serving on the timber management staff. In 1954, he went to the Regional Office, working in timber management, and serving as head of the timber sale layout and valuation section until he was reassigned to the Willamette as Forest Supervisor, where he served until his retirement August 1, 1970. [8]

Gibney was a wilderness lover, relaxing from the stresses of office with horseback trips into such areas as the Goat Rocks Wilderness in the Gifford Pinchot National Forest. Skilled and tireless at negotiating, he was equally at home in the woods, working out with the woods boss a difficult problem in cutting practices, or in the office working on scenic or environmental problems on a dam project. He was interested in people as well as resources, carrying the message of the Service to the people in a series of well-planned speeches, planning "show-me" trips to problem areas, and implementing the visitor information service. He brought these traits to the Supervisor's Office at a time of stress, marking the transition from an era of intensive management to one of confrontation and conflict. [9]

A series of administrative changes in the ranger district organization occurred during this period. At the south end of the Forest, the Rigdon Ranger District was set up in 1947, carved from the southern part of the Oakridge District. The western part of the McKenzie District was set aside as the Blue River Ranger District in 1956, and West Boundary had its name changed to Lowell in 1953. In the Salt Creek and Mill Creek drainages, the Salt Creek Ranger District was set up in 1959, but was disbanded in 1962. In the north, Mill City was set up as a separate ranger district in 1959. In 1968, it was consolidated again with Detroit. Also, the names of two ranger districts were changed to be more reflective of the town or city where the district was relocated. Thus, the West Boundary RD became the Lowell RD in 1953 and the Cascadia RD became Sweet Home RD in 1963. [10]

The basic philosophy behind the small districts was the fact that the large districts, such as McKenzie Bridge, had, in Edward Anderson's words, "3,300 man hours of non-delegatable district ranger work...and at best when a ranger worked full time, took his leave, etc., he got in 1,800 hours...add the fact that the Supervisor expected 75-80 percent of your time in the field, which meant all your office work had to be done nights, Saturdays, and Sundays. Then there was the feeling about that time that the district should be small enough so the ranger was personally acquainted, on a first name basis, with every rancher, farmer, logger, tree, coyote, deer, elk, or whatever was on the district, another impossible situation." However, other problems developed. Anderson wrote, "one of them was, as time went on it developed that the idea of small districts was great, except you started classifying and you were lucky to get a district ranger who was a GS-7, and that was against all wishes of everybody so the small-district philosophy gradually faded into the past." [11]

Other administrative units were established. The McSweeney-McNary Act of 1928 had established 11 geographical areas in the United States, with a Forest and Range Experiment Station for each. Research began to shift from field research to the laboratory, and Congress provided funding for laboratory construction. In 1962, the Forest and Range Experiment Station built such a laboratory at Corvallis, working closely with the forestry department of Oregon State University. The 14,490-acre Blue River Experimental Forest—renamed as the Horace J. Andrews Experimental Forest in 1953—served as a demonstration forest for the regional station at Corvallis. [12]

Meantime, the boundaries were tightened up. One, the largest land exchange in the history of the Forest Service, involved 11,000 acres in checkerboard pattern in the Rigdon Ranger District owned by Pope and Talbot. It eliminated 83 miles of boundary line, and gave the Willamette NF

valuable recreational land abutting reservoirs. Another involved a 4,353-acre exchange with the Giustina Brothers Lumber Company in a tract near Blue River reservoir. In the Sweet Home District, about 8,000 acres were exchanged with the Hill interests. These exchanges eliminated many miles of boundary, disposed of tracts that had no public access, and in general made for a more efficient management. Another exchange was made with the Murphy Lumber Company, which owned some land in the Columbia Gorge. They exchanged 310 acres in the gorge for 322 acres near Oakridge. The exchange protected some scenic values in the gorge and provided a good boundary adjustment in the Willamette National Forest. The major exchanges were made in 1967-1968, but negotiations over boundaries had in most instances taken many years to complete. [13]

Three other aspects of administration deserve attention. First, there was a vast increase in the number of people employed on a year round basis. The Multiple-Use Sustained-Yield Act of 1960 required detailed analyses of the forest resources. Preparation of multiple-use atlases for each district required painstaking study by experts in all fields—forest, grazing, water resources, mining, and recreation. The services of the Pacific Northwest Forest and Range Experiment Station were called upon, as well as those from the division of personnel from the Regional Office. However, increasingly, the Willamette National Forest hired its own experts. It was in a position to do so. The G.I. Bill for World War II veterans had produced a large group of highly qualified forest school graduates, and the favorable balance of receipts over expenditures in the Willamette National Forest placed it in a favored position for appropriations.

Second, was the aid of technology in meeting the tasks of the foresters. These included, in the office, computers to handle the vast amount of data; in interpretation, elaborate audio-visual programs, and a flood of published brochures; in fire fighting, sophisticated equipment to supplement the traditional axe/Pulaski/shovel of an earlier period; in transportation, four-wheel-drive vehicles, planes, and helicopters.

A third factor was that, though the basic goals of the forest were those of multiple-use, there was an increase in special managed lands. This included wilderness, wild, and research natural areas, totalling 250,000 acres in 1962, and 258,914 in 1968—about one-sixth of the total Willamette NF area. [14]

MINING AND GRAZING

Mining underwent some major changes in the Willamette National Forest during the post-war period. National need for minerals led to a revival of mining activity, particularly in the Hewitt interests on the Little North Fork of the Santiam River, and in some other areas. But post-war legislation led to a new era of controversies.

To recapitulate: Mining laws until 1955 allowed the taking up of claims secured by annual assessment work, or patented by payment, and permitted use of the claims surface non-mineral resources—grass, soil, and timber—so long as such use was needed for the actual operation of the claim. During the war, the assessment was not required, on the grounds that many prospectors were called to the armed services, and could not do the work on their claims. The lax laws led to many abuses, summarized by Christopher Granger in an article in the *Journal of*

Forestry. Granger pointed out that many patented claims had never produced minerals, and were used for other purposes, especially summer homes. Less than 15 percent of the patented claims on the national forests produced minerals in commercial quantities, and less than three percent of the unpatented claims were productive. In Washington and Oregon of 5,988 claims recorded, covering 184,673 acres, only three were producing mineral. The claims had 1,945,842 board feet of timber on them, worth, by 1949 figures, $13,246,060. Pumice claims in Washington and Oregon covered large timber holdings, and blocked access roads, through the refusal of claimants to give rights-of-way. Granger urged several channels of reform: A system of miner lease rather than ownership; granting title only to the mineral rights, with timber cutting under Forest Service regulation, and only for use on the claim; title of the claim to be renewed every five years, and locations recorded at Federal law offices. [15]

Some spectacular scandals occurred in southern Oregon and elsewhere involving pumice claims used as a blind for stealing timber, and as a result, a thorough revision of the 1872 law was passed in 1955. It reaffirmed a Mineral Deposits Act of 1947, taking pumice, cinders, and pumicate from the operation of mining laws, and providing for their mining under regulations of the Department of the Interior. Timber cutting, on a claim within the national forest, was to be carried on under Forest Service regulations. The Forest Service could dispose of the timber and other surface values on the claims. In other words, the title of the claimant was only to the mineral and not to anything else. It also provided that all titles be registered with the Bureau of Land Management (BLM); previously, records of claims had been scattered in state and county record files all over the country. [16]

During 1960-1961, the Willamette National Forest staff set to work by ground and air survey, to examine the status of the mines, to determine which claims were worked and seemed to be valid, and which were abandoned or invalid. Claims patented before 1955 were examined for their validity. On those which had not passed to patent, the Forest Service began management of their surface resources. On those of questionable validity, either due to lack of assessment work or lack of a sufficient mineral discovery, it challenged the validity of the claims. After public notice in the newspapers, claimants were given 150 days to assert their rights to surface material. Hearings were before the BLM.

A fair number of claims were invalidated or judged abandoned. The major problems regarding mining came, as might be expected, from the Little North Fork area of the Santiam. (For background see Chapter III). Examiners found that of 216 claims, 199 were of questionable validity, and called for hearings on them. These included some of the old claims, and others patented in 1955 and 1957.

The problems regarding the road to the Hewitt claim remained, and remain, unsolved. As already noted, the mining claimants, of which James Hewitt was the kingpin, considered the road to be private, and there had been a great deal of pulling and hauling over the right-of-way for Forest Service vehicles. In 1939 the Secretary of Agriculture declared it to be a public road, and some CCC work was done on it. The company, however, placed a gate across the road, giving the Forest Service a key allowing them access, but denying public access. In 1945, the Forest Service acquired a formal right-of-way, but this had a time limit and expired. The government

did not seek a renewal, since the right-of-way had many stipulations that the government thought burdensome.

In 1960, the Service began examination of the claims in the area. Hewitt offered a deal which involved a right-of-way across the claims, and a waiver of surface rights in return for validating the claims. However, the Service had no authority to make such a deal, and the matter remains unsolved. [17]

A second controversy arose over pumice claims on Rock Mesa on the border of the Deschutes and Willamette National Forests just east of South Sister. The issue arose in 1961, when Sheldon T. Clay and seven others filed on 11 claims, totalling 1,460 acres, on a pumice deposit in the Three Sisters Wilderness. These claims were conveyed to U.S. Pumice in 1961. The Forest Service felt that such an operation was incompatible with wilderness status. After examination, the Regional Forester issued a statement to that effect to the Bureau of Land Management, which had jurisdiction over mining claims. The BLM supported the Forest Service, asserting that the claims were improperly filed and could not be justified as a valid discovery. First, the BLM asserted, the claims were on unsurveyed land, and therefore could not be described by legal subdivisions. Second, when the location notices were filed in 1963, the description was faulty; and third, because the claims were described as placer claims, they should have been limited to a total of 20 acres per claim. Also, the BLM asserted that three of the ten claims were non-mineral in nature, and only part of the other claims were mineral. The validity of these claims, and their final disposition, would have to wait for another two decades. [18]

Grazing, formerly the dominant activity in the high country of the forest, had a precipitate decline. From the thousands of sheep and dozens of grazing permits in the forest as late as the 1930s, the number shrank to 268 head of horses and cattle and a dozen permittees in 1957, and 290 head with 11 permittees in 1961. The last sheep grazed in the forest were in 1947. The decline was caused partly by the reforestation of the mountain meadows and the extension of restricted areas, and partly by changes in the management practices of the sheep raising industry.

However, as the high country was used increasingly for pack trips, and with wilderness classification for large areas, restrictions were established on grazing of pack and saddle stock. Some areas had become overgrazed; in others, there was need to keep the stock from areas used for camping, and from streams and lakes. These restrictions were part of the management plans of the Mount Jefferson and Three Sisters Wildernesses and in the Waldo Lake area. Experiments were made in seeding alpine meadows, and packers were notified of areas in which it would be necessary to pack their own horse feed.

With the decline of commercial grazing, there was a shift in emphasis toward examining the relationships of grazing land and forest land for wildlife habitat. Much of the work of grazing examiners was replaced, or supplemented by that of wildlife biologists. [19]

WILDLIFE

Major shifts also occurred in regard to the forest and wildlife in the period 1945-1970. Nationally, scholarship and research had brought about a change from protecting game by means

of refuges, extermination of predators, and bag limits, to new methods. These included study of game habitat as a means of determining the carrying capacity of management units, study of how the habitats could be enhanced, and studies in predator-prey relationships. Such research had been going on for some time, but reaching conclusive results in any research takes years and even decades. By the late 1930s, however, studies by scholars such as Aldo Leopold and Durward Allen were bearing fruit. The rush of students taking advantage of post-war G.I. Bill helped to produce many scholars in the field of wildlife management, and schools of forestry increasingly added optional courses in wildlife management to their majors. In the Forest Service, the Pacific Northwest Forest and Range Experiment Station began its own wildlife studies. [20]

Within the Willamette National Forest, management had previously involved stocking streams and lakes, enforcing game laws, observing game behavior, and keeping simple statistics on the observed game and predators. With the passage of the Multiple-Use Sustained-Yield Act of 1960, wildlife were to an equal basis with other forest uses, especially timber management, and the Service included big game management in its multiple-use plans.

Management involved cooperation between the State of Oregon and the Forest Service, since fish and game resources were under jurisdiction of the Oregon Game Commission. The Forest Service managed the habitat, the state the game. The relationship needed to be formalized, and in 1955, a cooperative agreement was made between the Forest Service and the Game Commission, which was revised and updated during the 1960s. The Forest Service agreed to aid the Commission in enforcing fish and game laws, giving them facilities for work, making wildlife inventories, and helping the Commission in its management. For its part, the Commission agreed to share facilities with the Forest Service, to ask Forest Service permission to introduce exotic species and to use poison against predators, to advise the Service of changes in policy, and to give the Service annual reports. The Forest Service also worked closely with other Federal agencies concerned with wildlife, with the University of Oregon, and with national and local wildlife groups.

There was major progress in wildlife habitat management for deer and elk in the post-war period. The number of predators declined, much it due to natural fluctuations in populations and bounties paid by the State of Oregon and various counties. Hunting activity increased, but not in proportion to the higher population increases. With the building of trans-Cascade highways, a larger percentage of hunters crossed to the east side of the mountains, where the forest areas were open and the climate drier, rather than hunting in the dense, rainy forests on the west. On the west side there was an increase in the amount of favorable habitat, thus an increase in the number of deer and elk, such that the carrying capacity of the game ranges was increased. Poaching remained a problem, but lessened with general prosperity, since fewer families had to kill game for table meat.

The objective of habitat management, in the Forest Service multiple-use plans, was to maintain wildlife at optimum levels, linking timber harvest with forage production, especially for winter range. The game animals should be harvested to keep their population at optimum levels, with special hunts if needed to reduce the population to the carrying capacity of the winter range areas. Habitat management for big game was assumed to take account of the needs of small

game birds and other species. The Forest Service division of information and education should work to develop plans for interpretation of wildlife conservation, and work closely with the Izaak Walton League and the Oregon Wildlife Federation. Browse species and grass was planted on the edges of harvest units and along skid roads. The value of power line openings was studied, both as a source for Christmas trees and as a place to plant browse and grass for game and birds. Snags, usually felled, were to be left standing as nesting sites in areas of low fire hazard.

In regard to fishing, the stocking of streams and alpine lakes continued. Buffer strips were to be preserved to protect stream temperatures, and nest trees near streams getting special attention. Fishing was protected by prohibiting the felling of trees into streams, and yarding across streams; by removing debris from streams; providing for drainage of skid and spur roads; and replanting of exposed areas of mineral soil. Special care was taken to protect nest trees of eagles and osprey. This same type of management was also to be carried out around reservoirs. On lakes, wherever both water skiing and fishing were sports, the lake waters were zoned, so one group would not interfere with the other's enjoyment. Motor boats were limited in number, or totally eliminated from some lakes. [21]

During the 1930s the elk population was about 270; by 1970 it was 5,000. Deer population during the same time went up from about 4,500 to 47,000. The methods of timber harvest tended to favor such increases. Areas opened by logging and site preparation yield extensive amounts of grasses and browse, which the big game animals thrive on. Natural fire had formerly made the openings, and now timber cutting took its place. Some areas, such as the divide between the North and Middle Forks of the Willamette, which were favored by elk, were reseeded with rye grass. In areas where deer injured seedling conifers, chemicals to render the browse unpalatable were experimented with. [22] Older second growth Douglas-fir forests, with their dense canopies, tend to have shade tolerant types of browse only with low nutrient value. The mature timber provides important shade in the hot summer months and protection during the critical winter months. The old growth habitat tends to provide a mixture of shade and protection, as well as spots of grasses and browse. The particular values of old growth for wildlife habitat, including big game and other species, have become a much argued about factor in current management. [23]

DEVELOPMENTS/CHANGES

There were a series of dramatic changes on the face of the forest between 1945 and 1970. Dams were built for flood control, hydroelectric power, and water storage on the Santiam, Willamette, and McKenzie Rivers. A network of roads linked all parts of the forest; and there was a major building program for Forest Service personnel and for recreationists.

Beginning in the later 1940s, the controversial Beaver Marsh Dam was proposed by the Eugene Water and Electric Board (EWEB) to dam Clear Lake and divert the upper McKenzie River water to another dam and power plant at Beaver Marsh. The project caused great concern among the upper McKenzie residents and citizens of Eugene. A number of groups formed to battle the project, including the Save the McKenzie River Association, McKenzie River Protection and Development Association, National Parks Association, Federation of Western Outdoor Clubs, Izaak Walton League, and the Seattle Audubon Society. (Several of these groups would be

involved with Willamette NF management in the coming years.) After many court battles, the Beaver Marsh Dam project was put to a special Eugene election on March 27, 1956, where the proposal was turned down by the voters. After the election, EWEB proposed an alternative hydro-electric project called the Carmen-Smith Project, which covered some of the same area as the Beaver Marsh project.

The Willamette NF had an impact in planning the Carmen-Smith Project, which consists of Carmen Dam and Diversion Tunnel, Smith River Dam, and Trail Bridge Dam. The EWEB originally planned a dam and diversion canal, a power house, and a fish channel just to the south of Sahalie Falls. The initial plan for the canal was for it to be about three miles long to carry water from the upper reservoir, the Carmen, to the lower one, the Smith Reservoir. The opposition groups argued that such a canal would not be in keeping with the wild character of the country, and Supervisor Gibney was able to have the diversion unit made a tunnel. Construction work began on the project in 1960 and it was completed in 1963. [24]

The 1950s and 1960s saw several other dams begun and completed. The Detroit Dam was the earliest, begun in 1953; this was followed by the Lookout Point Dam and Dexter Reregulating Dam, begun in 1954. Construction started on Cougar Dam in 1956; Blue River and Saddle Dams in 1960; and Hills Creek Dam in 1962. These were all Corps of Engineers projects.

Just to the west of the Willamette, the Foster Dam (Middle and South Santiam Rivers) and Green Peter Dam (Middle Santiam River) were constructed. There were, in addition, a large number of dams proposed, but not built, and a re-regulating dam below Cougar (to be called Strube Dam) which has been authorized, but funding has not been approved by Congress. There were public hearings on all these dams, and a large number of controversies concerning the effect of the dams on wildlife and fish runs, erosion control, and the like. Analysis of these matters is properly a study of Corps of Engineers history, so this tempting bi-way must be passed over. [25]

The dams created new tasks for the Forest Service. They meant timber sales to remove trees in the areas to be inundated; clearing up slash on these sales; relocation of campgrounds, roads, and ranger stations; and preservation of recreational values in the vicinity of the reservoirs, together with the development of erosion control and timber harvest. They also meant the task of developing programs for water-based recreation in the forests.

One other dam deserves attention; this involved repairing a historic dam rather then constructing a new one. In 1908 and in 1909, permits were granted to Amos R. Black for a power and irrigation project, involving a dam and tunnel at Waldo Lake. In 1914 a dam/headgate, 30 feet high and 40 feet across, and 500-foot long, seven feet high and ten feet wide, tunnel through a narrow ridge, were completed by Simon Klovdahl. The power project, however, was never activated. In the early 1930's, the Waldo Lake Irrigation and Power Company proposed developing the lake for extensive power production involving four power plant sites and miles of diversion canals. In 1933, the Federal Power Commission denied their request and the following year the Forest Service terminated their special-use permit.

In the course of time, during the mid-1950s, the Willamette National Forest discovered a large number of holes in the 40-year old dam. There was some fear that it might be drained below its

normal outlet and that fish spawning beds might be destroyed. In the normal course of events, the Forest Service would have constructed a road into the area and brought in the equipment needed to do the job. However, Waldo Lake was classified since 1946 as a limited area—which meant to withhold major developments until the final status of the area was decided (wilderness or multiple-use). In spite of the restrictions, the job was finished in 1960 by an unusual combination of modern technology and primitive methods. Two Forest Service employees who were skindivers, Mo McAdams and Ed Stout, probed around the base of the dam, determining its location and size. Finally, they barged timber across the lake from the east side, and built forms for a new face on the dam. The work was carried to a successful conclusion. [26]

Some dams made it necessary to relocate two ranger stations. The Detroit Ranger Station, formerly located in the area now covered by the Detroit Reservoir, was relocated in 1952 to higher ground to the north of the highway. The West Boundary Ranger Station was in the area covered by the Lookout Point Dam Reservoir, and it was relocated to Lowell in 1953. Extensive relocations of highways and timber access roads were necessary in the vicinity of the new Blue River, Cougar, Detroit, Hills Creek, and Lookout Point Reservoirs.

Dams brought about a flood of other management problems. Relocation of roads near reservoirs to replace old roads in inundated areas, or to give access to water-based recreational facilities, meant many new engineering problems. New practices near reservoirs or streams were adopted. These included small, staggered timber sales, ensuring reproduction in logged areas, and careful location of roads, bridges, and culverts. New campgrounds had to be located at Detroit, the South Fork of the McKenzie, and at Hills Creek; and recreational planning had to take account of boat launching sites and marinas. Boats were acquired in order to do maintenance work on the reservoirs, such as clearing debris and salvaging logs. Routes for power lines were cleared, and plans for using such cleared areas for Christmas tree harvest and wildlife habitat were studied. Log jams and debris were cleared from river beds in a large number of small salvage sales. [27]

The Columbus Day storm ("blowdown") in 1962 caused major problems. The big storm downed an estimated 140 million board feet of timber, caused many log jams on the rivers, which led to numerous sales to salvage the timber before it was attacked by beetles. This was followed by the Christmas week flood of 1964 when torrential rains and floods hit most of the Northwest forests, but the Willamette suffered the most damage. Six campgrounds were totally destroyed, and seven severely damaged; roads suffered slides and washouts, and many bridges and culverts were destroyed. The flood control reservoirs at Detroit, Hills Creek, and Lookout Point were covered with floating logs and debris from the storm. An area of 40 acres at the Lookout Point Reservoir and 230 acres at Detroit were floating with storm debris. Much of the timber was salvaged, but it was months before the roads and campgrounds could be restored. [28]

Road building during this period increased. The Willamette NF reported 950 miles of road in 1954; this had increased to 3,784 in 1972. Some 200 miles of roads were Federal and state highways—US 126, Oregon 20, 22, 58, and 242. Most of the forest roads gave access to timber sales, but a number of them were primarily for recreation. The traditional method of preserving roadside scenic or visual corridors, a roadside strip of uncut timber between the road and timber harvest or borrow pits, was continued, and added to this were scenic outlooks and waysides. Along Aufderheide Drive (Forest Road 19), which connects Oakridge and the Willamette

Highway with Blue River and the McKenzie Highway, a series of roadside interpretive signs were put up, showing reforestation after the railroad logging of the North Fork of the Willamette area, as well as historic and commemorative features at Box Canyon. [29]

The era 1945-1970 saw a major program for the Forest Service administrative buildings. The last of the ranger stations built by the CCC was replaced by 1966. An increase in the number of permanent employees, as well as the huge summer swell of temporary employees, meant that new office space was needed at every ranger station. In addition, the Forest Service was undergoing a transition to computers and comprehensive mapping and resource inventory systems that needed a considerable amount of office space. Gone were the days when inventories were kept in the ranger's head or in the daily diary. In addition, the Willamette needed a large array of trucks, tractors, tankers, and road equipment to administer the developments on the ranger district. This meant that more garages and storage sheds were needed. In some districts the whole complex of old buildings had to be replaced due to dams flooding the site (in the case of the West Boundary RS) or more convenient location (in the case of Cascadia RS). [30]

FOREST RESEARCH

Research during this period underwent some fundamental changes. One major shift in emphasis was the study of the relationship of people to the out-of-doors. This included anti-litter campaigns, study of patterns of outdoor recreation, and examining the social aspects of camping. By 1971, the research station had a staff of 149, devoted to work on 38 separate proposals; and the number of natural areas devoted to research in the Region had risen to 42.

Research became decentralized. A series of research centers were established at Corvallis, Olympia, La Grande, and Roseburg. As has been mentioned, in 1948 saw the establishment of the Blue River Experimental Forest (renamed as the H.J. Andrews Experimental Forest on July 26, 1953, to honor the memory of deceased Regional Forester Horace J. Andrews). The "Andrews" was used initially to study optimum methods of harvesting Douglas-fir. This involved experimenting with clearcuts to determine the optimum size, partial cutting, and studying the respective advantages of artificial versus natural regeneration. In 1949, a harvest of 10 million board feet was made, with studies of the size of optimum clearcuts, road building, and siltation, in other areas, the centers studied the use of various chemicals in brush control; the use of fire retardants; how best to handle flood damage after the floods of 1948 and 1964; and utilization projects to determine methods for using waste for fiberboard and pulp. Cull lumber, the type with white fungus specks, was found to be suitable for making plywood. During the 1960s, the Andrews research emphasis shifted to studies of watershed and the effects of logging on water quality and quantity. Studies were made of insect control, particularly the beetle and tussock moth. Beginning in 1969, when the Andrews was selected as one of the intensive study sites of the Coniferous Forest Biome Project of the International Biological Program (IBP), emphasis again shifted to studies about the plant-environment relationships. [31]

In the Willamette National Forest, research focused on timber management and wildlife. A large plantation was set up near Westfir, and in 1961 a 20-acre plot, the Heather Tree Orchard, was established there. This unit was for experiments in forest genetics in order to identify and perpetuate rapid growing trees through transplants of root stock. Studies of natural restocking

and the need for planting were carried on in clearcuts. By 1954, foresters came to the conclusion that natural restocking would occur up to 500 feet from the green strips in clearcuts of less than 50 acres, with the exception of south slopes. In addition, extensive tree planting activities were made at the orchard. Aerial spraying of insecticides was carried on for the spruce budworm and the lodgepole sawfly. Much work was done with the Oregon State Game Commission and the USDI Fish and Wildlife personnel. In the H.J. Andrews Experimental Forest, the research division of the State Game Commission carried on studies of game utilization of forage in the clearcuts, changing deer and elk populations, and animal damage to forest reproduction. Several study plots and enclosures were established in the Lowell and McKenzie Bridge Ranger Districts. [32]

Several research natural areas (RNA) were set aside in the forest during this time. The first RNA to be established was the Olallie Ridge RNA in 1963. This two-unit 720-acre RNA, at the summits of Horsepasture and O'Leary Mountains, was chosen to represent mountain meadow and true fir-mountain hemlock communities prevalent on high ridges in the Western Cascades. (Olallie Ridge RNA will again be mentioned later in another connection—that dealing with the French Pete controversy.) The Gold Lake Bog, 463 acres, was established in 1965. This area was chosen to preserve some prime subalpine bogs along the eastern edge of Gold Lake. The Wildcat Mountain RNA was set aside between Blue River and Sweet Home on March 18, 1968. This tract of 1,000 acres had the largest stand of old-growth noble fir in Oregon. [33]

The necessity for planting was dependent on how effectively natural reseeding worked out. Studies made in 1960 showed that 36 percent of clearcut areas did not restock satisfactorily after seven and a half years. The aim of the forest was to have such restocking within five years from the cutting. There were enormous variations on the individual sales, depending on weather, soil, whether or not there had been good seed years, and the like. Through the use of Knutson Vandenburg (KV) funds, an extensive planting program was undertaken, especially the the North Fork of the Willamette area. Seedlings were grown in the Wind River Nursery, Carson, Washington. When the seedlings were two years old, they were shipped to be planted. There was a great deal of community effort in the tree planting, with Boy Scouts, 4-H Clubs, and schools participating. [34]

TIMBER HARVEST—Cutting Practices

Changes in cutting practices developed during the period 1945-1970. Initially, clearcutting with seed trees left standing was common in the Douglas-fir forests of the Pacific Northwest. However, the seed tree system left something to be desired, since single seed trees, or small groves were subject to windthrow during the strong winter gales. An era of selective cutting was inaugurated during the term of C.J. Buck as Regional Forester, but it proved unsatisfactory. After Buck's term had ended in 1939, clearcutting was resumed. [35]

The advent of extensive truck and tractor logging operations after World War II also brought about smaller clearcut units, rather than the huge clearcut logging operations common to railroad logging. These smaller timber sales permitted sales to small operators, who could afford to log with only a relatively small investment in equipment. Tracts of timber not large enough to justify building an expensive logging railroad could be opened up. Truck and tractor logging were

however not adaptable for use on steep hillsides and rough terrain. These tough areas needed special equipment and practices to be fully harvestable. High-lead logging, balloon, and helicopter logging methods were tested, improved, and utilized on the forest.

Much of the timber on the Willamette was old-growth and mature stands of Douglas-fir. These stands were relatively stagnant, losing many board feet per year to windthrow, disease, and decay. The major losses were in the most valuable trees, the "yellow fir" that produced clear lumber and plywood. The aim of the foresters was to replace the old forests with new—to convert the old-growth stands to new growth, to utilize old trees, and to harvest trees likely to be windthrown. Ideally, the logging activities would bypass growing parts of the forest to harvest mature stands; extend the transportation system so diseased, insect killed, and windfall timber could be harvested, and young stands thinned; avoid large areas of slash accumulation; and leave large areas of the forest in reserve to assure reproduction, protect watershed and game habitat, and protect amenity values and recreation areas. The ideal logging system would be one to convert a tract from a virgin timber basis to a vigorous second growth basis in about 100 years—the number of years needed to produce a mature timber stand.

What developed was area selections; also variously known as patch cutting, logging by staggered settings, or clearcutting in small blocks. The principle was to clearcut small areas and leave reserve or seed strips surrounding the cut areas. Enough light could get into the clearing to encourage reseeding, particularly Douglas-fir seedlings, over other species. Area selection made for less hazard, encouraged salvage sales, created a good big game habitat, and did minimum damage to watershed.

All this involved a close association among engineers, foresters, and scientists. Roads were laid out so that the areas bypassed by the initial cut could be harvested after the reforestation of the area. Essentially, this meant planning road systems that could be used 20 or 40 years hence, for making a second cut, and for interim salvage sales. The ideal in the Willamette National Forest was to keep cruising, mapping, and road location at least five years ahead of logging operations. The right size for cutting patches was learned by trial and error. Sale areas of 100 or 200 acres were laid out. These areas did not reseed completely. By 1949, clearcuts were limited to 40 to 100 acres each, with no cutover areas less than 1,000 feet from the green timber. As elsewhere noted, planting programs were carried on with the aid of Knutson-Vandenburg funds. [36]

There was a major miscalculation in adopting these cutting practices. This was failure to ascertain the visual impact of the clearcuts. As has been noted, the Forest Service early adopted a system of screening the more unsightly uses of the forest, like logging or operation of gravel pits, from the public. This took the form of having buffer strips, usually 200 feet wide, between the operations and the road, so the visitor could not see the logging operation, and the forest had the appearance of being unbroken. The roadside screen worked well into the 1940s. Then logging began in the hills and mountains, and the operations could be observed from roads and residences along the way; or, in Alaska, from vessels plying the Inside Passage. Americans grew up with a rectangular system of survey, and the squares or oblongs along the mountain sides, "like diapers on a line" offended the aesthetic senses of many people.

Further factors were the increased urbanization and mobility of people. Oregonians who had lived in rural surrounding were familiar with nature's rapid self-renewal, and could look forward to the regrowth of the forest. Urbanites, seasonal residents, and visitors did not recognize this fact, and tended to equate clearcuts with strip mining. The Sierra Club and other environmental exploited this ignorance in numerous publications, suits, and other attacks. Clearcuts had a very bad press, especially after 1960. In the Willamette National Forest, these attacks were particularly strong from residents of the upper McKenzie River. There had been a drift of city dwellers to this area, who bought summer homes, as well as an influx of Californians, who carried the preservation philosophy with them, creating a rift with the local residents who depended on the forest for their livelihood. [37]

By 1969, the Forest Service began to modify its clearcut program. This involved adapting the shape of the clearcuts to the terrain to form part of a scenic picture. Landscape architects were brought in to advise on shaping the cutting areas to conform to the natural land forms. In addition, the size and shapes of clearcuts were modified to lessen damage caused by winter gales. [38]

New techniques for timber harvest developed during this time were more efficient or less disturbing to the land. Studies were made of the relative efficiency and feasibility of tractor logging, in which the logs were pulled to a landing, and cable logging by the high-lead method, which involved aerial transportation of the logs to lessen timber damage and soil disturbances. The first had the virtue of flexibility; but it involved a great deal of road planning, with the possible creation of environmental damage. Rubber tired tractors were utilized for thinning in order to reduce the amount of soil compaction. In aerial logging, variations of the traditional network of cables were experimented with. Balloon logging, using blimps instead of spar trees, was tried as early as 1965. All methods worked well, but were vulnerable to storms. Helicopter logging also was experimented with. [39]

All this meant that timber sales had become a highly complex business. In the offices, economists and administrators studied timber inventories, reconciling allowable cut—the upper limit of annual cut for the forest or an area in the forest, which was a short-term economic and social problem with sustained-yield, the longer time span for the forest, which was primarily a scientific and biological problem. By the 1960s computers were brought in to assist in this work. In the field, engineers, foresters, wildlife experts, fish biologists, and landscape architects worked on cohesive plans with the foresters and engineers of lumber companies, and developed plans for slash disposal and fire prevention. The information office tried to keep the public informed.

In two important articles, Regional Forester Charles Connaughton, summed up the problem. In the article aptly titled "Forestry's Toughest Problem," Connaughton wrote, "The toughest problem facing the forestry profession today results from a major segment of the public not realizing commercial forest lands can be managed without destroying its utility and appearance. Consequently, much of the public lacks confidence in foresters as stewards of the land." Connaughton admonished the forestry profession to adopt management objectives and techniques "which result in acceptable conditions on the land that the public can and should be shown." The forester had to sense the attitudes of people, many of whom thought that the best

use of the forest was no use. Multiple-use is generally more valuable than restrictive use. They should demonstrate that use of forests and preservation of natural beauty can be harmonized. "Management and protection of natural beauty is just as much a part of forestry as silviculture, fire protection or insect control." Forestry schools should be informed about public attitudes toward forest use, and research people should ally themselves with foresters in working out these problems. [40]

In 1970, he addressed himself specifically to the clearcutting problem. Attacks on clearcutting claimed that it was devastation, and asserted ill-defined environmental effects. Foresters felt that clearcutting was a sound tool in forest management. Foresters, as stewards of the forest, must submit their practices to public scrutiny, and adjust techniques. But in doing this, they were not to submit to pressure that would jeopardize the silvicultural foundations of forestry, or sound practices. There was need for aggressive explanations of practices. There was also need to use variability, not uniformity, in management; to allow land openings to coincide with nature, and cutting areas to blend with, not conflict with the terrain. Reconciling silviculture and aesthetics would be sound practice. [41]

FIRE CONTROL

Fire control underwent a major revolution in the period between 1945 and 1970. Historically, it marked the ending of the highly picturesque period between 1915 and 1945, when the important link between the ranger station and dispatcher's office and the fire area was the lookout-fireman. Using the Osborne firefinder, the lookout located the fire on the map and got one or more cross bearings. Often, laden with a 70-pound pack containing a Pulaski, portable radio, iron rations, and sleeping bag, the smoke chaser took off across country to attack the fire. Use of lookouts for detection was replaced by lookout points on roads, patrol planes, and helicopters. Road travel now was possible to most fires. In off-road areas, smokejumpers dropped to the fire, or helicopters brought in fire fighting crews. Lookouts were phased out, partly because other means of detection were more efficient, partly because of an increase in vandalism. From 42 lookouts in 1954, the number went down to 17 in 1966. A smokejumper base was established at Redmond, Oregon, to serve forests in the area. They provided planes for scouting and reconnaissance work, transport planes to fly in men and supplies, and helicopters. The forest had constructed 155 heliports by 1955. Bulldozers, jeeps, power wagons, tanker trucks, and pump trucks supplied attack forces from the ground, and crews of loggers and residents formed a strong "at need" group of fire fighters. There was a major decline in human caused fires.

The immediate post-war period was marked by a series of bad fire years. A combination of bad fire weather and a great deal of slash to burn led to a bad year in 1949 when two large fires of about 1,000 acres each occurred in the McKenzie drainage; 1951 also was a bad fire year, with the HeHe fire of 2,721 acres, and the Sardine of 4,371. Then came a series of years with few fires (see Appendix). Also 1958 was a bad fire year, with one lightning bust on August 4th causing 70 fires. The largest of these fires, in Canyon Creek, covered 1,025 acres. Smokejumpers, aircraft, helicopters, and tractors got on the fires. Jumpers made 38 jumps on 13 fires. Three helicopters got men and equipment into fire areas, and several hundred men were called on to do the ground work. Aircraft dropped 16,000 pounds of equipment, and 13,500 gallons of retardant were dropped on the fire.

All human efforts cannot prevent fires from spreading where conditions are bad, and 1967 was such a year. Fire blackened 14,965 acres, took the effort of 6,000 men to control, and cost $3.5 million. August was a dry month with no rain and with logging camps on hoot owl shifts. A lightning storm on August 10th started a total of 228 fires, which burned 558 acres, but were quickly controlled. On August 28th, lightning storms struck again, starting 111 fires affecting all but the Lowell and Rigdon Ranger Districts. The earlier fires had had the manpower and plane power to get on the job promptly; but other fires were raging in Washington and Oregon, and it was difficult to get the manpower needed. On August 29th, the Willamette National Forest was closed to entry because of the emergency, and not until after September 3rd were the fires brought under control. [42]

RECREATION—BACKGROUND

The period after 1945 was marked by major changes in American recreational habits. The population soared from 150 million in 1950 to 200 million in 1969. General prosperity and abundant leisure time led to more use of national and state parks and forests. In 1933, eight million people visited the national forests; in 1940 there were 20 million visitors. With a major change in man/acre relationship on wild lands, there came at the same time the development of equipment, devices, and sports that necessitated more space, and the need to set aside specialized areas for downhill skiing, cross country skiing, snowmobiling, travel by trail bikes and off-road vehicles, pack trains, backpacking, water skiing, whitewater boating, stream and lake fishing, and the like. This meant a need to develop more facilities for recreational groups enjoying the forests, which represented, numerically, the largest single series of groups. It also meant meeting the needs of the wilderness groups, who were the smallest numerically, but who demanded more land to meet their particular needs, and wanted this land off limits to other types of recreation.

There were changes also in the makeup of the American people. At the turn of the century, the majority of Americans were rural dwellers; by 1970, only three persons out of ten were rural dwellers. Freeways and highways made almost every national forest accessible with a minimum of inconvenience. From many people there was the demand in rural campsites for most of the programs like to those of the National Park Service. [43] The Multiple-Use Sustained-Yield Act of 1960 placed recreation on a par with other forest land uses, and the Forest Service began to develop its own team of recreation specialists. After a great deal of lobbying, the Wilderness Act was passed in 1964, which classified wilderness as a separate category. [44]

There were changes also in the nature and tactics of the conservation and environmental groups. Generally speaking, as has been noted, the Forest Service had worked well with such groups as the Mazamas, the Mountaineers, Obsidians, Chemeketans, and local outdoor or sportsmen's clubs. After 1950, some clubs expanded from regional to national status. The Sierra Club was the most notable of these. The club had been, in the past, mainly a regional organization, with headquarters in California, and having little interest in the Pacific Northwest. In the earlier years, its leadership consisted of businessmen from the San Francisco Bay area who were relatively moderate in their views. In 1952, however, David R. Brower became executive director and held the office until 1969 when he was forced to resign because of internal disagreements. Brower set to work to make the Sierra Club the national spokesman for outdoor matters. Its membership grew from 5,993 in 1947 to 72,000 in 1970. Brower was doctrinaire in his approaches regarding

the Forest Service, the lumber industry, or, in fact, anyone who disagreed with him. His views appealed to the urban middle class, whose sole interest in the out-of-doors was recreational use; to young idealists, making up in zeal and enthusiasm what they lacked in knowledge; and to campus radicals, both faculty and students, who saw the interest in ecology as radical chic, combining, in Irwin Unger's words, "the irreproachable love of mother nature with just enough defiance of technology and capitalism to make it interesting."

A note on terminology is order. The old term "conservation" (invented in 1907 by Gifford Pinchot) and "conservationist" were defined as wise use of the land promoted by people who had no economic interest in the land—in other words, excluding the timberlot owner, the grazer, or the lumber company—with use of the land for the benefit of the many. The new term "environmentalist" came to mean an individual or group that promoted full protection—almost no use—of the land and resources. [45] The environmentalists tended to view conservation as those individuals and groups that promoted the "unwise" use of the land and resources—in other words any development that did not promote preservation. New environmental groups rapidly spread their influence, affecting the makeup and bending the positions of many older conservation groups in order to spread the messages of the Earth Day generation. [46]

The forest managers had their traditional tasks of upholding standards of administration within their areas of responsibility; of determining the wants and needs of the people; of carrying on research; and of explaining to the public their reasons for taking certain courses of action. In meeting these demands, the Forest Service had to adapt its interpretive program to new times. Several areas of oversight from earlier eras were corrected.

The National Park Service had adopted a visitor information service at an early time. The Forest Service did not introduce one until 1962. As early as 1931, Walter I. Hutchinson pointed out a weakness in this area. People involved in public relations worked with the Regional Forester, but had no meetings with their counterparts in other regions, and little supervision from the Washington Office. (This weakness has been mentioned previously in the failure of Region 5 and Region 6 to cooperate on the Pacific Crest Trail.) In addition, many foresters were not primarily public relations men; they liked to be out in the field, and though they worked well with stockmen, loggers, and lumbermen, they did not address the general public. In addition, Hutchinson wrote, "In early days, we preached tree conservation and the beauty of the forests instead of the practical and economic side of forestry. So today, when we cut timber, even under tried and true forestry conditions, the public in many localities sees only forest devastators." [47]

The Forest Service made a determined effort to catch up with its interpretive needs. The effort met with varied success in varied forests. An instructive parallel can be made between the Tongass National Forest, Alaska, and the Willamette. In Alaska the visitor information service (VIS) was headed by a former National Park Service interpreter, D. Robert Hakala. All the visitors to southeastern Alaska came by boat, mostly cruise ships; so Hakala developed a shipboard interpretive program, which had spectacular success. Most of the Alaskans in the area at the time were people who lived off the land, and were well acquainted with Forest Service policies; so when the Sierra Club introduced a program of misrepresentation of the Forest Service, it was met with a "Sierra Club, Go Home" response. [48] In the Willamette, Supervisor Gibney brought in new specialists to interpret the forest to visitors; visitor centers were set up,

and Gibney and his associates made speeches on many aspects of forest management to all kinds of audiences. However, a sizeable part of the population and visitors were urbanites who came into the forest by a variety of routes; campus radicals presented a special problem; and the Sierra Club succeeded in polarizing opinion.

The years 1945-1970 were marked by two trends in recreation management. One was development of a series of controversies with individuals or groups at the regional or national level. Accompanying these was a steady, quiet, and efficient development of recreational programs and facilities of all types. In this account, we will deal first with the controversies.

CHANGING PATTERNS IN RECREATION—McCREDIE SPRINGS

This period marked the end of a long and controversial time in the history of McCredie Springs. The period from the 1930s to the 1960s was an interesting one, and can best be studied as a whole. Hot and mineral springs had played an important part in the recreational development of the Willamette National Forest. They became less important during the 1930s and after World War II. The old leisurely pattern of recreation, in which the people moved to gracious hotels for a week or a month, tended to disappear with the building of roads and the popularity of the automobile. People tended to be on the move, and motels catered increasingly to the transient visitors. Some resorts, like Breitenbush and Belknap, continued operation; others, like Foley, went out of business. In addition, the hot springs on national forest land, where resort owners had their facilities on lease, were in danger of having the sites considered by the Forest Service to be more valuable for public camp sites than for private profit.

McCredie Springs, as was previously noted, had been operated as a resort off and on since 1914. It had had a series of difficulties with the Forest Service—on the part of the Service in reconciling roadside zoning with the wishes of the lessees, and on the part of the lessees by controversies over signs, facilities, and activities to be carried on. During the 1930s, however, there developed for a time a plan to use the springs for a social experiment, similar to the model village plan developed in nearby Westfir and Oakridge.

Warm Springs, Georgia, had attracted national attention when President Roosevelt used it as a vacation spot and a place to treat his polio. Why not have a Warm Springs for similar purposes in Oregon? An Oregon Warm Springs Foundation was established; Eugene doctors endorsed the idea; the *Register-Guard* gave the project extensive publicity; and the state administrator for WPA stated his approval of using WPA labor to build such a facility. Supervisor Thompson was attracted by the idea. In 1938 he wrote to the Regional Forester that he had applied to the WPA for a million dollars. $250,000 would be used to clear and landscape the ground, leaving a 200 foot scenic strip between the road and the buildings. He suggested building a hospital and resort and developing power from the waters of Salt Creek. Regional Forester C.J. Buck replied to Thompson, January 20, 1938, asking him to give the project the highest priority. Congressional support came from Senator McNary. Meantime, Buck wrote to H.B. Hammon of the State Public Health Service about the project. Hammon answered, after an examination, raising questions about sanitation and sewage. The plan, like the model village plan was dropped, probably because after 1938 a high priority was given to defense preparation.

In 1946, the springs were held on a 20-year lease by Edwin L. Whistler. The resort was not well managed. As George Owen wrote in a letter to the Forest Service Chief Ed Cliff, December 26, 1962:

> For instance, nearly all those who operated the resort before us were poor risks indeed. One was an ex-convict with a very bad reputation, others were alright [sic], but had no money and could do nothing to make the place a recreational asset; and the operator before us was the most impossible person we have ever known. She sold liquor to minors, one teenager was killed, another maimed for life in a car accident while intoxicated on McCredie Springs liquor while returning to Oakridge. She ran a house of ill-repute and after we came, again and again, men came there asking my wife for girls, not knowing it had changed hands. She had three crews, one working, one coming, and one going, and borrowed money and obtained credit at Oakridge, Eugene, Springfield, everywhere, and would only laugh at her creditors. She was taken to jail and was headed for jail many, many times, but always managed to borrow bail money and was as slippery as an eel at evading the law. The Deputy Sheriff at Oakridge said again and again that she alone caused his office more trouble than the entire population of Oakridge and Westfir with fringe areas put together, some eight to ten thousand people.
>
> All these facts are well known to Forest Service officials here who, according to the terms of the lease could have and as a duty to the public should have closed her up. But she had guns and boasted she knew how to use them and rumor believed by all, of how she had boasted of killing a man in California and got away with it, and Forest Service officials there, it seemed, preferred to stay healthy.

In 1950 George Owen, lumberman and philanthropist, took over the lease, though the transaction was not completed until 1959. Owen found himself beset with problems, some inflicted by nature, some by bad luck, some by the government. In 1956 a flood did a great deal of damage, and Owen was criticized by the Forest Service for not cleaning up the debris promptly. In 1958 the lodge burned; in 1959 the chlorination unit in the pool allowed raw chlorine to escape, and the pool was closed by state health officials. In addition, the Forest Service was not sympathetic to Owen. The Forest Service, after a series of investigations between 1956 and 1960, concluded that the operation was wholly unsatisfactory, and recommended terminating the lease in 1966. District Ranger, Forest Supervisor, and Regional Forester were all in agreement that the operation was poorly run, and that the area could be used better as a public facility.

Owen did not give up. He refused to sign a new temporary lease terminating in 1966, and began a series of appeals. These included an appeal to Congressman Charles O. Porter. In a long letter to the Chief Forester in 1962, he dealt with the past record of the Forest Service in tolerating abuses by lessees, writing, "Local Forest Service officials have been guilty of at least tolerating some of the skum [sic] of the earth who operated this beautiful resort in the past while tying our hands by demanding we sign a lease that would reduce our investment to zero." Owen, by contrast, pointed out his own record as a public spirited citizen, and his contributions to recreation. These included work on the City Council of Eugene, and donations of land to the City of Eugene, and Spencer Butte Improvement Association, the Izaak Walton League, and the New Life Youth Corporation for park purposes.

Cliff denied him a new permit; but Owen kept up the fight. He appealed to the Secretary of Agriculture, who also said no. In a new appeal, published in the *Register-Guard*, April 8, 1964, he reduced his demands to a few acres, to include the pool and room for a lodge. However, the Forest Service position was that the site was needed for a future campground, that it had deteriorated as a resort, and that the resort would have to compete with the City of Oakridge for tourist trade. In the public interest, it should become an addition to Blue Pool Forest Camp. Owen, by September, asked the Chief Forester to donate the site to a group who would run it in the public interest. This was the New Life Youth Camp, a camp to rehabilitate juvenile offenders, in which Owen had a great interest. Letters on this subject were also sent to Senator Wayne Morse and to Maureen Neuberger. However, though Supervisor Gibney expressed some interest in the project, Forester Cliff denied all applications, and asked Owen to remove his property from the land.

The controversy showed every sign of continuing, but it was settled by an act of God. The Christmas flood of 1964, took out the buildings and other facilities. [49]

MARION LAKE AND WALDO LAKE

Major controversies rose over the size and areas to be included in the wilderness system. These involved three of the Forest Service wildernesses: Three Sisters, Mt. Jefferson, and Waldo Lake. They were controversies over definition and interpretation of the Wilderness Act, the areas concerned, and management policies. The controversy over Marion Lake related primarily to interpretation of the Wilderness Act.

Sentiment rose during the 1920s for giving a special status to the series of peaks, passes, and lakes in the area around Mt. Jefferson; it came from Forest Service personnel like C.C. Hall and from Mazamas and other outdoor clubs. On October 10, 1930, the Mt. Jefferson Primitive Area was set aside consisting of 52,200 acres. In 1932, a number of organizations, including the Mazamas, the Izaak Walton League, and local groups such as the Salem Chamber of Commerce, the Chemeketan Hiking Club, the Marion County Game Association, and the Santiam Fish and Game Protection Association asked that it be enlarged. In 1933, the area was enlarged to 86,700 acres by inclusion of Three Fingered Jack and a large number of alpine lakes. [50]

Marion Lake and Pamelia Lake were not included in the area. As it has been noted earlier, Fred W. Cleator, when laying out the Skyline Trail, had planned these lakes as semiprimitive camp area inaccessible by road, but with some developed campgrounds and summer homes. They were essentially rest stations near the Skyline Trail, where travelers could arrange for pack strings and supplies, and rest after the hardship of trail travel. At Marion Lake there were two additional factors. First, it already had two summer homes, one built in 1913, the other in 1925. Also, it was the site of a water power withdrawal, made in 1929 by the Northwestern Power Company. This project involved making Marion Lake a reservoir, and building a diversion canal at Whitewater Creek with a six-mile long canal to the power house on the North Santiam River. The project was largely to supply Salem and Albany with power. The Forest Service and the Oregon State Game Commission objected to the project, and eventually it was not approved; but at the time, the Forest Service was considering primitive area withdrawals, and the matter was not settled. [51]

Plans were made to include the Mt. Jefferson area, following the visit in 1938 by Robert Marshall; but war and defense preparations prevented any action. In the 1960s the Forest Service began reclassifying the area. Outdoor clubs in Oregon recommended a 117,242-acre wilderness; the Forest Service recommended a 96,844-acre wilderness. Public hearings were held in 1964; but they were inconclusive, and in September the Wilderness Act was passed, which placed its size in the hands of Congress.

Further hearings were held in October, 1966. The most attention was given to the inclusion in the area of a large number of alpine lakes. These included Pamelia Lake and Marion Lake. There was little difficulty experienced in including the trail corridor to Pamelia Lake, and the lake itself, in the wilderness; the major question rose as to Marion Lake and the trail corridor leading to it.

Marion Lake, over the years, had become a favorite fishing place. People had packed boats into the area, and left them there. To protect the boats, a boathouse had been built, and a boat owners association formed. Other developments at the lake included campgrounds and picnic tables, fireplaces, and water pumps. Supervisor Gibney took steps to protect the area by declaring a moratorium on timber harvesting in the enlarged area desired by the outdoor clubs, and protected Marion Lake by placing it within a 1,596-acre scenic area in order to protect the old-growth timber. Congress, in October of 1968, established the Mt. Jefferson Wilderness (P.L 90-548) with 96,462 acres, including Marion Lake.

Any questions over the developments in the Marion Lake area were addressed by the committee report on the bill, which directed the Forest Service to remove the recreation facilities and boats, as well as restore the wilderness character of the area. The Willamette National Forest followed the letter of the law, and removed the boathouse and other recreational developments to allow the area to revert to its wilderness status. The boat owners were given several delays to remove their boats, but within several years they were gone from the lake. [52]

The Marion Lake case was one of a series of test cases involving the definition of "wilderness," and facilities within a wilderness. The Forest Service tended to define wildernesses as those areas in which human impact has been slight; outdoor clubs, desirous of getting as much land in wilderness status as possible, desired consideration of land which was marginally wilderness in nature, and, in the opinion of the Forest Service, more valuable for multiple-use management. Another question was what facilities were permissible within the wildernesses. The Forest Service felt, correctly, that the presence of boats in the Marion Lake area, and of camping sites, fireplaces, and water pumps was incongruous with wilderness designation, and these were removed. Trail shelters like the heavily used Sunshine Shelter and others along the Skyline Trail were also removed as being human habitations, and hence out of keeping with the wilderness designation. They had also been victims of vandalism. A guard station at Gold Lake was also removed. This policy was not particularly approved of by some recreationists; Bill Parke, for example, thought that some of the shelters should have been preserved as being of historical value. The issue had become one of increased importance, especially with the passage of the National Historic Preservation Act of 1966. Should cairns erected by the Mazamas as repositories for their climbing records be preserved? What protection should be given to historic sites like sheepherders camps or to archeological sites? Should artifacts be left *in situ* or be

packed out? These are problems that arose not only in the Willamette National Forest, but in parks and forests throughout the nation. [53]

Waldo Lake became another center of controversy. A favorite camping and hunting spot, it early became an irrigation and power site. The power site permit was revoked in 1915, a year after the dam was built, and Waldo Lake was restored to its classification as a limited area in 1946, pending plans for its development. The Skyline Trail passed through the area, and the CCC had built several campsites. The area was subjected to a detailed study under multiple-use/sustained-yield guidelines, and in 1961 Supervisor Gibney released his multiple-use plan which was approved by the Regional Forester. The plan called for recreation as the dominant use of the area, some grazing, and concern for wildlife habitat. Timber harvest would be limited, and done largely in right-of-way clearing for roads, and for sanitation cuts. The plan was objected to by the same groups who had opposed the French Pete plans (see next section). They were joined by the Lane County Parks and Recreation Commission, which had been influenced by Sierra Club representatives. They protested any timber harvest, and urged that the series of lakes to the north of Waldo Lake be managed as a wild area.

On appeal, the Regional Forester, in April, 1962, issued a general High Country Management Plan. This policy called for very limited logging in areas above 5,000 feet. The multiple-use plan was modified to fit this policy, and on September 17, 1963, the Regional Forester endorsed the new Waldo Lake Recreational Plan. Outdoor clubs protested, but in Washington, DC, the Chief endorsed it. The plan called for keeping the west side of the lake open only to trail travel, with the exception of some limited use of off-road vehicles. On the east end of the lake vehicular travel would be permitted, and the small lakes to the north would be subject to multiple-use management. No large timber harvest areas would be permitted, but an appeal by outdoor clubs that all cutting be banned was denied. An advisory committee would help the Service with management policy.

By 1968, the Waldo Lake recreation area was opened to the public. A 12.2 mile road connected the lake with Highway 58, the road being built well back from the lake in order to preserve scenic values. Clearing the right-of-way involved a timber sale of 3.3 million board feet to the Kinnan Logging Company. The early roads constructed to Skookum Creek and Box Canyon were reconstructed by the Hines Lumber Company, who were given a timber sale in the area, and whose logging road became a scenic road when the sale was completed. Several large new campgrounds were completed—North Waldo, a 60-unit area; Shadow Bay, a 103-unit campground; and Islet, a 60-unit. Campsites were built well back from the lakeshore to preserve scenic values. [54]

THE OLALLIE RIDGE/FRENCH PETE CONTROVERSY

The Olallie Ridge/French Pete controversy, especially in the period 1957-1970, was one of those controversies which has had lasting effects on the Forest Service and on the community. It made for a lasting rift between the Forest Service and the recreation-oriented groups, and it showed a remarkable tactical skill on the part of the various environmental groups. The complete story is not given here. It would require access to the records of all the individuals and groups involved and to the papers of the various public officials including Senators Wayne Morse, Richard

Neuberger, Robert Packwood, and Mark Hatfield; Representative Jim Weaver; and Governor Robert Straub. This account is based on interviews primarily with Dave Gibney, former Forest Supervisor, and Forest Service records at the Eugene Supervisor's Office and the Regional Office, and does not pretend to give the entire story. [55]

Supervisor Pat Thompson and various Eugene groups wanted to create a primitive area similar to the Mt. Jefferson Primitive Area in the Three Sisters region. Thompson assigned William Parke the task of making a report on the area. With Ray Engles, Parke traveled the Skyline Trail, made an inventory of timber values, and prepared a report recommending creation of the Three Sisters Primitive Area. In 1935, Thompson and Parke studied the area and decided that the boundary on the west should be set at the east side of Horse Creek and thence southward to Frissell Crossing where it meets the South Fork of the McKenzie River. However, when Robert Marshall, Washington Office chief of the division of recreational lands, made a field trip to the Willamette, he suggested that the boundary be extended to the west, making the South Fork the western boundary. This addition had in the past been prime grazing land. Most of the timber was second growth, and the addition was made. [56]

In the 1940s new classifications were made, eliminating the title "primitive" and setting up new designations: "Wilderness" for areas of 100,000 acres or more, and "wild" areas for those of 5,000 to 100,000 acres. In addition, in the Northwest, another category was added—"limited" areas. These were "stop, look, and listen" areas which needed further study, and on which no logging or other activity could take place until an environmental study was made to see if they qualified. Parke made a number of studies on the forest and recommended that Diamond Peak be established as a wild area, which Rudo Fromme had studied and recommended as a primitive area as long ago as 1930. Parke also studied areas near Mt. Washington.

In 1950 the matter of the Three Sisters area came up. Parke, then in the Regional Office, helped to organize field trips by the Forest Service and various hiking clubs to examine the area. [57] The proposal to be examined was the desirability of eliminating the addition to the west side of the Three Sisters, and of restoring the boundary formerly favored—that of having the west boundary at Horse Creek and Frissell Crossing, and of adding wild areas near Diamond Peak, Waldo Lake, and Mt. Washington. A field examination was made by the Forest Service and "certain Oregon outdoor clubs." The Forest Service recommendations were favored. However, the Eugene Natural History Society had not been invited to take the inspection trip, and they felt that the area excluded had important ecological and scientific values. On July 13, 1951, 23 interested people met at the old Belknap CCC camp at McKenzie Ranger Station to discuss the matter and take another field trip through the region. District Ranger Brit Ash was present as well as Regional Office representatives including Parke with recreation, Leo Isaac of the research station, Huber of wildlife, and Wilson of water resources. Representatives of the Eugene Natural History Society, Obsidians, Mazamas, Trails Club, and the Wilderness Society were present.

In their discussion, the Obsidians and the Natural History Society felt that the original boundary should be kept. They stressed scientific values which needed to be available to scholars at the University of Oregon. It was pointed out to them, however, that only one or two people had carried on studies in the area, that no stations had been established, and that there had been no

student field trips. The Forest Service had found there was little old-growth timber in the area; most of the timber was second growth, less than 100 years old. However, the timber harvest would amount to 21 million feet per year, worth $200,000 per year, and would provide $50,000 annually for schools and roads. The area was not really connected with the Three Sisters mountains, and the region was of value to the hiker rather than the mountaineer. The Service did propose modifications of the boundary, however, to include all life zones in the area.

As a result of the study, the Wilderness Society and most of the organizations accepted the Forest Service multiple-use plan. The Obsidians wanted to keep the larger boundaries, as did some Californian members who "obviously did not know all the details, but were for anything that looked like conservation." The Federation of Western Outdoor Clubs thought that the west boundary should be Horse Creek and Eugene Creek, and that the area west of this should be classified as a limited area, pending thorough examination. The Service, with this in mind, began a 10-year study of the area to determine its use. [58]

Most of the area to be eliminated lay in one of the most rugged areas of the Willamette National Forest, with a rough terrain, sharp ridges, and precipitous creek slopes, reaching a depth of 3,000 feet at French Pete Creek. The land was widely used by campers and hunters, and had been used by sheep grazers before World War II. The area included the rocky part of Sawtooth Ridge and the barren slopes of Lowder Mountain, Yankee Mountain, and Tipsoo Butte, used widely for sheep grazing until the 1960s. The area to the south included the drainage to the east side of the South Fork of the McKenzie River, and had a good growth of timber. [59]

In 1954, public notice was given of the proposal to classify 196,709 acres as the Three Sisters Wilderness, and to establish the Diamond Peak and Mt. Washington Wild Areas. Most people favored the Diamond Peak and Mt. Washington proposals. The question of the acreage to be included in the Three Sisters area resulted in a spirited controversy. Some people were for Horse Creek as the western boundary; others sought a boundary along Olallie Mountain and Horse Pasture Ridge; still others thought Separation Creek would be the proper boundary. Many stressed the need to preserve scientific values in several relict ecological areas. The numerous letters necessitated a public hearing, and such a hearing was held in Eugene on February 16 and 17, 1955. The record of the hearing, and other pertinent facts, were sent to the Secretary of Agriculture. The Secretary decided on February 3, 1957, to establish the Three Sisters Wilderness and exclude 53,000 acres west of Horse Creek. Also, a special plan would be developed for the excluded French Pete area. Wilderness status was not to be considered for the area, but scientific, ecological, and scenic values would be protected until the management plan was finished. [60]

In the period between 1957 and 1968, three things occurred. First, the Forest Service began developing its multiple-use plans for the area. These included some timber sales, particularly in the areas where there was insect infestation; plans for stream rehabilitation, French Pete Creek having suffered some damage in recent floods; and setting aside a number of natural and special interest tracts. The areas—Olallie Ridge Research Natural Area, Lowder Mountain Geological Area, Lamb Butte Scenic Area, Quaking Aspen Swamp Botanical Area, Yankee Mountain Scenic Area, and Rebel Rock Geological Area—were set aside, on request of the Secretary, to preserve valuable scientific, ecological, or scenic values. [61]

Second, the Sierra Club discovered Oregon. The club had previously cooperated with the Mazamas in hikes, but it had no district representative, and had not cooperated with the Mazamas or the Forest Service in developing the Pacific Crest Trail. By 1950, however, the Sierra Club had begun a program of national expansion, with the aim of becoming the dominant force in wilderness preservation. In 1954, a district representative, Brock Evans, was chosen to lead the new Pacific Northwest Chapter. In 1959 the Sierra Club issued a major blast against the Forest Service. The article was full of misrepresentations, with French Pete pictured as a virgin forest, "destined to be clearcut, with destruction of the luxuriant primaeval forest." Lumber interests were accused of wasteful practices, and the national demand for lumber was, according to the article, supposed to be on the decline. It advocated the creation of a Volcanic National Park, extending from Olallie Lake in the north to Diamond Peak in the south, totalling 972,000 acres. [62]

Third, the signing of the Wilderness Act of 1964, which included the Three Sisters Wilderness. The passage of the Wilderness Act through Congress took several years of political lobbying by various environmental organizations, especially the Sierra Club and the Wilderness Society. Generally, the Forest Service opposed the bill as it had already established administrative wilderness areas in many parts of the country, including the Three Sisters Wilderness. Also to have Congress establish wildernesses would be unnecessary and redundant since the Multiple Use-Sustained Yield Act of 1960 provided for recreation on the national forests. While the wilderness battle was going on in Congress, Irving Brant, an environmentalist and personal confidant of President Roosevelt, visited Eugene. He described to Secretary of Agriculture Orville Freeman what he observed:

> I was hardly surprised to find the Forest Service fighting against its own system of wilderness protection. The supervisor [Gibney] of the Willamette National Forest...was addressing public meeting, telling people that the pending wilderness bill (which would become law in 1964) was a scheme to lock up timber resources and prepare the way for conversion of the entire wilderness system into national parks. That same forest supervisor, I reported, was working for a recreation plan that would open the beautiful Waldo Lake area to logging. Also, the Forest Service had in 1957 taken large forested areas out of the Three Sisters Wilderness and had begun bulldozing roads [a road connecting the East Fork of the McKenzie with the Foley Springs Road] into the eliminated areas to frustrate any movement to restore their protection. I concluded with the hope that Freeman would tackle the difficult job of making the national forests serve the national benefit. [63]

Matters came to a head in 1968. In the winter of 1967-68, Michael Kerrick, Ranger of the Blue River District snowshoed in to take a look at the East Fork of the McKenzie River area in which a timber sale was proposed for early 1968. This sale was to be the first timber sale in the 53,000 acres excluded in 1957 (commonly called the French Pete or Olallie area). Kerrick and his staff felt that the sale, which had been laid out in 1964, was not up to current Forest Service standards so far as silvicultural and some environmental aspects were concerned. He recommended that the sale not be offered without further work, and since the sale would undergo a great deal of scrutiny, it would be well to prepare it according to the highest possible standards. [64]

However, several environmental groups found out about the proposed timber sale and began to use it as an opening wedge to attack the Secretary's 1957 decision. The Save French Pete Committee was formed in Eugene by local people who proposed that the area be left in its natural state, with no roads or management activities. The committee said that the valley was only one of three roadless valleys that were 10 miles of more in length remaining in western Oregon. In addition, Richard Noyes, chair of the Save French Pete movement, wrote an article for the *Sierra Club Bulletin* which summarized many of the objections the proposed multiple-use plan. The Forest Service plans, he asserted, would mean "clearcut removal of about 18 million board feet of timber." Actually the plans called for a few small clearcuts, with the remaining sales being on a selective basis. Noyes dealt with the fish, asserting that the streams had "the best population of cutthroat trout to be found." This also was not the case. The Service reported that the recent floods had caused habitat damage, and there was need to enhance the fish habitat through debris removal. Noyes said that the valley was unique; the Service found other valleys in the Western Cascades of comparable nature. [65] Requests by the committee and others for a postponement of the sale were granted. On the advice of District Ranger Kerrick, the sale was cancelled.

In June, 1968, Michael Kerrick, District Ranger for the Blue River District, submitted a new management plan for the French Pete area. The Forest Service had worked this out in their multiple-use plans, as directed by the Secretary's 1957 decision and the Regional Forester's high mountain policy statement of 1962, which limited and applied restrictions to timber harvest in the mountains. [66] During the year, also, an alternative plan, called the French Pete Intermediate Recreation Plan, was prepared by the Save French Pete Committee. They wanted French Pete to be "an area from which public roads and commercial timber harvest was excluded, of sufficient size to accommodate a variety of outdoor experiences without crowding." The project was similar to the "semi-wilderness" in the planning of Fred Cleator, during the 1930s, for Pamelia Lake and Marion Lake. It was an expression of the general philosophy that management degrades, rather than enhances habitat, and that such things as tree disease and insect infestation will cure themselves if ignored. [67]

During the summer of 1968, a series of meetings were held on the French Pete project. Supervisor Gibney asked that the local newspaper, the *Register-Guard,* give full publicity to the controversy in order to solicit public reaction. The letters received in regard to the controversy give an interesting background. Opposition to multiple use management came from a series of individuals and organizations; 50 percent of those from individuals came from members of the University of Oregon faculty and their spouses. A large number of the organizations opposed to multiple-use were centered or had their leadership on the University of Oregon campus. The environmental organizations opposed to multiple-use fell into four categories. First were the groups organized by or closely associated with the Sierra Club. Of these, the Save French Pete Committee was the most important; others included the Friends of the Three Sisters and the Oregon Conservation Council. Second were older outdoor organizations which had been taken over by or sympathized with the activist factions. The Eugene Natural History Society was one of these. Third were local groups and individuals like Prince Helfrich, a McKenzie River guide; Karl Onthank, a former Mazama official; and the Willamette River Watchers, summer home owners who had had some differences with the Forest Service on river management and

clearcutting. Fourth were the older outdoor clubs like the Obsidians and the Chemeketans, which were divided in their opinions.

Of the responses favoring development of multiple-use plans for the French Pete drainage, 36 percent came from lumber interests. Others came from the Oregon Sheep Growers Association; four chapters of the Society of American Foresters; the Chambers of Commerce of Lane County, Oakridge, Florence, and Springfield; and the Upper Willamette Soil and Water Conservation District. Meantime, tentative plans for development were made in April; and during the summer numerous "show me" trips were taken to the area for representatives of the outdoor clubs and timber industry. During the fall numerous presentations were made to service clubs and other organizations in the area. [68]

In March, 1969, Supervisor Gibney appointed a committee of 23, made up of all segments of local opinion, to examine alternative plans. By a majority of 18 to 5, the committee approved the Forest Service multiple-use plan. On March 25, the Supervisor announced that he had approved a management plan that met the specifications set forth in the Secretary's 1957 decision. On June 16, the Forest Supervisor's decision was appealed to the Regional Forester, Charles Connaughton. The appeal was made by eight environmental organizations, as well as a McKenzie River resident. In addition, representatives of the Save French Pete Committee had a personal interview on July 7th with Thomas K. Cowden, the Assistant Secretary of Agriculture, and Forest Service Chief Edward P. Cliff in order to present their views. On September 5, the Assistant Secretary, and on September 12, the Regional Forester, both denied the appeal, and supported the Forest Service plans as being consistent with establishment management directions. In November, further appeals were made on the procedural ground that a proposed timber sale had been announced while they were still in the process of perfecting these appeals. They were sent to the Secretary of Agriculture's Board of Forest Appeals. The board held that it had no jurisdiction and referred the matter to the Chief. However, on November 17, after the Oregon Congressional delegation requested the the Forest Service allow more time before action was taken, Secretary of Agriculture Clifford Hardin asked that the timber sale be postponed, and asked all parties to make suggestions and comments, with a deadline for submission on January 17, 1970. The Chief appointed a special task force, and on June 2, 1970, the Chief upheld the French Pete management plan. This decision, in turn was appealed to the Secretary. [69]

All the above was accompanied by a great deal of fanfare on the part of the groups opposed to the Forest Service plans. A student group, calling itself Nature's Conspiracy, demonstrated in November at the Forest Supervisor's Office in Eugene. The demonstration was estimated between 500 and 1,500, depending on who was counting. In the face of conflicting testimony, the precise make-up of Nature's Conspiracy is hard to determine. This writer's tentative judgment is that the nucleus of the group was made up of students and faculty members mobilized by the Sierra Club and affiliated organizations, with a sizeable number of students simply coming along to see the show. [70] They carried a petition to the Supervisor, who declined to meet them outside, but met a delegation in his office. Meantime, a group supporting multiple-use, "French Pete for the People" was organized under the leadership of Garnett E. Cannon, an insurance company executive and out-of-doorsman, who was joined by Philip Schneider, president of the Oregon Wildlife Association. The state federation, made up of a large number of outdoor clubs, had endorsed the Forest Service plans, which involved management of the meadows and timber

to improve wildlife habitat, particularly for elk, and to increase pasturage for pack stock, and improvement of fishery habitat. [71]

In 1970, three events occurred which changed the course of the controversy. The National Environmental Policy Act of 1969 (NEPA) was signed into law on January 1, 1970. This was interpreted as requiring an environmental impact statement for any work carried on in the drainage, and such a study would postpone any timber sale. Second, Senator Robert Packwood decided to endorse the Intermediate Recreation Area Plan, and in late 1969 brought it to Congress as a bill. Third, Zane Smith, Gibney's successor as Supervisor, decided to handle the future of French Pete as a unit in the overall land use plan study for the Willamette National Forest, to be completed in 1975. This placed the issue in the political arena, where it remained. The political history of the French Pete issue is intriguing, but cannot be told fully until the papers of the various officials are open to the public. [72]

To summarize, one can divide the French Pete affair into four time periods. The first was from 1937 to 1957 when the Three Sisters Primitive Area was established, its boundaries revised, and its classification changed as a result of field investigation in 1950-51. This was followed by a series of appeals and the decision of the Secretary in 1957 to establish, administratively, the Three Sisters Wilderness and to exclude the French Pete drainage. The second, from 1957 to 1967, was marked by the Service's implementing the Secretary's recommendation that natural areas be set up (completed in 1962), the official establishment of the nearby Three Sisters Wilderness by the Wilderness Act of 1964, and by development of multiple-use plans for the area, including plans for timber harvest, recreation, water values, wildlife, and fisheries. The third period was from 1967 to 1970, during which the Sierra Club and supporting groups attacked various plans for the French Pete Creek area by mounting a major publicity campaign and by numerous administrative appeals. In this period, the Forest Service showed a spirit of cooperation and accommodation, taking members of the activist organizations on tours of the area and participating in public discussions. After 1970, during the last period (see the next Chapter), the issue became politicized, with Senator Robert Packwood's adoption of the issue as a political one. Final Congressional action on French Pete would not be completed until 1978.

RECREATION

Aside from these controversies, recreation shared with timber sales a dominant place in forest use. Some statistics may be cited; in 1953, Supervisor Bruckart reported 65,000 campers and 50,000 anglers were using the Willamette National Forest campgrounds and waters. By 1956, the numbers had grown to 95,000 campers and an equal number of anglers. Total use of the forest for recreation had doubled since 1946. By 1966, the number of campers increased to 225,000. A different system of computation was introduced in the 1960s, which gave the forest 2,166,200 user days. Camping made up about 25 percent of the normal day use, followed by motorized travel, water sports, fishing and hiking, and organizational camping. [73]

In the high country, the Skyline Trail was relocated over a period of years, beginning in 1960. Increased travel on the trail had created special problems. The soil in the highlands is thin and subject to erosion, especially on grades where a rapid snow melt makes for a fast run off in the spring. Water bars and relocation to minimum gradients were used to alleviate the condition.

Other factors were accessibility to scenic views, and efforts to direct travel away from widely used areas. New stream crossings were located, especially at hazardous crossings where the melt from glaciers in the summer made for a fast run off after 11 a.m. A number of interpretive trails were built around the Dee Wright Observatory. [74]

The campgrounds varied in number during this period, from 74 to 85, as new campgrounds were built and older ones enlarged or consolidated. The facilities built by the CCC had served well during the 1940s, when there was relatively little use; but by the 1950s they were showing signs of wear and tear, and new campgrounds were built. Some maintained the old rustic pattern of wooden tables and benches, earth pit toilets made according to the classic design immortalized by Charles (Chic) Sale in his book, *The Specialist* but others had refinements such as flush toilets, community shelters, and pumping stations to clean out holding tanks for recreational vehicles. A number of new organization camps were established: For example, Boy Scout camps were established along Detroit Lake, Melakwa Lake (Camp Melakwa in 1949), and Pine Ridge Lake (Camp Pioneer in 1946); a horse camp along Big Lake; and a Seventh-Day Adventist camp also along the edge of Big Lake. A network of trails connected the various areas, or went along streams for the convenience of anglers. In much of the campground and trail work, the Service was aided by the voluntary labor of groups such as the Sierra Club, the Oregon Association of Mounted Posses, and the Boy Scouts. [75]

During the 1960s, major problems in the forest were littering and vandalism. Littering was a widespread problem both in wildernesses and in other regions. Hiking clubs such as the Mazamas had traditionally had their own regulations for leaving clean camps; but the wide use of the wildernesses by unorganized groups led to a great deal of littering. Tin cans, foil from freeze dried foods, and garbage were found around the major campsites, and Forest Service employees in the wildernesses estimated that 30 to 40 percent of their time was spent in clean-up activities. In other areas, campsites and stream beds were widely used for cast off debris—from beer cans to disposable diapers. The Forest Service estimated that ten percent of its total recreation fund was spent for the clean up activities required from the two million visitors. [76]

Vandalism was an equally troublesome matter. Vandalism ranged from the destruction of historic structures, such as the 1918 cabin at Box Canyon, to breaking into unoccupied guard stations and lookouts, shooting holes in signs, damaging signs, toilets, and tables, and stealing vehicles. Survivalists, motorcycle gangs, and drug addicts drifted into the forest, with accompanying incidents of shootings, theft, and personal violence. Property loss to the forest amounted to $11,857 in 1971 and $7,151 in 1972. In the past, the problem of apprehending individuals was difficult since it meant locating a U.S. Commissioner to swear out a warrant. However, in 1972 legislation was passed authorizing the Federal government agencies to enter into cooperative agreements with sheriff's deputies for the enforcement of state and local laws on Forest Service administered lands. [77]

To help finance recreation, the Forest Service, in 1962, initiated a fee system at Paradise Campground, charging $1 per day for its use. In 1965, the Land and Water Conservation Fund was established, which formalized payment of a national fee for use of campgrounds. For payment of $7, a Golden Eagle annual permit would allow entry into all Federal areas where a fee was charged. Senior citizens were given them free. [78]

NOTES—CHAPTER V

1 Clawson and Held, *The Federal Lands*, 35-36.

2 Marion Clawson, *The Federal Lands Revisited* (Baltimore, 1983), 35-39.

3 Lawrence Rakestraw, taped interview with Michael A. Kerrick, Dec. 3, 1984.

4 Clepper, *Leaders in American Conservation*, 20, 77-78; Charles A. Connaughton, "Recollections" (mimeo), Rakestraw collection; J. Herbert Stone, *A Regional Forester's View of Multiple Use* (Santa Cruz, 1972), an interview conducted by Elwood R. Maunder for the Forest History Society.

5 Bruckart File, WNF/H.

6 Aufderheide File, WNF/H.

7 Transcription of an interview with Edward W. Anderson, March 24, 1983.

8 David R. Gibney, note to Lawrence Rakestraw, Sept. 29, 1985.

9 Personal conversations between Lawrence Rakestraw and David R. Gibney, 1945-1985.

10 *Annual Public Report Willamette National Forest, 1968* (Eugene, 1969), 17. [Hereafter cited as *Ann. Rep. WNF,* followed by year.]

11 Anderson Transcript.

12 Doig, *Early Forest Research*, 23; Munger, "Fifty Years," 226-247.

13 *Ann. Rep. WNF, 1967,* 20; *1968,* 17.

14 *Ann. Rep. WNF, 1962,* 35; *1968,* 24.

15 Christopher M. Granger, "Mining Claims on the National Forests: It's Time We Took Another Look," *Journal of Forestry,* 50:5 (May, 1952), 355-358.

16 Dana, *Forest and Range Policy*, 290-292.

17 Management Plan of the North Santiam, 1969, Detroit Ranger Station Historical Files.

18 Rock Mesa File, WNF/H.

19 *Ann. Rep. WNF, 1957,* 4; *1960,* 10; *1961,* 15; *1970,* 7; *1971,* 17.

20 James B. Trefethen, *An American Crusade for Wildlife* (New York, 1975), 256-269.

21 Wildlife Management Plan, Willamette National Forest, 1966, WNF/H.

22 *Ann. Rep. WNF, 1970,* 3-14.

23 *Ann. Rep. WNF, 1962,* 16-17

24 Carmen-Smith File, WNF/H; interviews with David R. Gibney; *Ann. Rep. WNF 1956,* 1; *1959,* 11; *1960,* 10; *1963,* 5; Gerald W. Williams, *McKenzie River Names: A Listing of Social, Historic, and Geographic Place Names,* (Portland, In Press).

25 Appendix J, "Willamette River Basin," in *Columbia River and Tributaries, Northwestern United States* (81st Cong. 2d Session, HD 531: Washington, DC, 1950), gives a list of projects. Gerald W. Williams has compiled a list of news items on the dams from the *Register-Guard.* An undated speech by David R. Gibney, "The Forest Viewpoint of Interagency Studies of River Basins" is highly critical of the lack of consultation by other agencies with the Forest Service. See also *Ann. Rep. WNF, 1952,* 4.

26 Clippings from *Register-Guard,* WNF/H; Waldo Lake File; Paul G. Claeyssens, *Private Enterprise and Early Twentieth Century Development on Oregon's Second Largest Lake: A Cultural Resource Evaluation Report of the Klovdahl Tunnel and Head gate Structure, Waldo Lake, Willamette National Forest, Oregon* (Eugene, WNF, 1987).

27 *Ann. Rep. WNF, 1952,* 4-5; *1953,* 2; *1956,* 1; *1958,* 3; *1959,* 11-13; *1960,* 10; *1964,* 5. Files on Detroit Ranger District, Blue River Ranger District, and Lowell Ranger District have a great deal of information also.

28 *Ann. Rep. WNF, 1963,* 9; *1965,* 3-7.

29 *Ann. Rep. WNF, 1952-1971,* show annual road building record.

30 Detailed description of building programs are to be found in WNF/H files on the individual districts. In addition some of the ranger district offices—especially Detroit, Sweet Home, and Blue River—have excellent files on buildings past and present. The Edward Anderson interview is valuable in regard to building problems.

31 Philip Briegleb, "Research in the Pacific Northwest," *Timberlines,* (June, 1971), 6-8; Doig, *Early Forest Research,* 18-29.

32 *Ann. Rep. WNF, 1953,* 3; *1954,* 4; *1955,* 5; *1959,* 3; *1960,* 10; *1962,* 17; *1963,* 13; *1965,* 11.

33 *Ann. Rep. WNF, 1968,* 17.

34 *Ann. Rep. WNF, 1972,* 3-14. See Chart.

35 T.T. Munger, "A Look at Selective Cutting in Douglas Fir," *Journal of Forestry,* 48:2 (February, 1950), 97-99.

36 Bruckart, "Taming a Wild Forest"; James S. Bethel, "Clearcutting in the Pacific Northwest and Alaska," in Elanor J. Horwitz (ed.) *Clearcutting: A View From the Top* (Washington, DC, 1975), 126-148.

37 I am indebted to Gale Burwell for discussion of the reaction to clearcutting in the upper Willamette Valley and to Arthur W. Greeley for general comments.

38 David R. Gibney, "Forest Patterns," speech delivered at Willamette Chapter of SAF, May 10, 1970.

39 *Ann. Rep. WNF, 1965,* 11-12; *1966,* 5; *1969,* 3-19.

40 Charles Connaughton, "Forestry's Toughest Problem," *Journal of Forestry,* 64:7 (July, 1966), 446-448.

41 Charles Connaughton, "The Revolt Against Clearcutting," *Journal of Forestry,* 68:5 (May, 1970), 264-265.

42 *Ann. Rep. WNF, 1967,* 3-22; David R. Gibney, "How Far Have We Come and Are We Going in Fire Control," speech before Oregon Logging Congress, February 23, 1968, Gibney File, WNF/H.

43 L.C. Merriam, "Challenge of Changing Forest Use," *Journal of Forestry,* 68:5 (May, 1970), 289-293.

44 Edward C. Crafts, "The Saga of a Law," *American Forests,* 76:6 (June, 1970), 12-19, 52-54; 76:7 (July, 1970), 28-35, is the best account of the multiple-use/sustained-yield issue. The wilderness issue is best summarized in the article "Wilderness Preservation," Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History* (New York, 1983), 693-701.

45 Michael P. Cohen, *The History of the Sierra Club 1892-1970* (San Francisco, 1988), deals with the overall history of the Sierra Club until the Earth Day era, which therefore only lightly covers the Pacific Northwest Chapter. Susan R. Schrepfer, *The Fight to Save the Redwoods* (Madison, 1983), 163-230 gives by far the best analysis of the Sierra Club during Brower's term as Executive Director. Also Schrepfer's paper, "The Sierra Club and the U.S. Forest Service, 1945-1960," presented at the 1987 American Society for Environmental History meeting in Durham, NC. John McPhee, *Encounters With the Archdruid* (New York, 1971), gives a realistic and impressionist picture of Brower. John J. Mitchell and Constance Stallings, *Ecotactics: The Sierra Club Handbook for Environmental Activists* (New York, 1970) deals with activism as applied to issues in which the Sierra Club was interested. Susan Schrepfer, *The Fight to Save the Redwoods,* 185, describes the book as the Sierra Club's "most abrasive publication to date." Lawrence Rakestraw, "Warning: The Chainsaw Cometh (?)" *Alaska Construction and Oil,* (May, 1972), 68-70 deals with "dirty tricks" of the Sierra Club in Alaska, and his "Conservation Historiography: An Assessment," *Pacific Historical Review,* 41:3 (August, 1972), 271-288 gives a more overall view. Merriam, "Challenges of Changing Forest Use" is valuable. In "WKSLHW," *An American Faculty* (New York, 1974), 16-

17, 89-91, and 114, two university professors write perceptively of student and faculty concern with environmental matters. L. Sprague DeCamp, *The Purple Petrodactyls* (New York, 1979), 201-228 writes a hilarious farce on the subject.

46 Michael McCloskey, "The Wilderness Movement at the Crossroads," *Pacific Historical Review,* 41:3 (August, 1972), 346-362.

47 Walter T. Hutchinson, "Public Relations: What We Have Bought and Where We are Headed," *Journal of Forestry*, 29:4 (April, 1931), 474-483.

48 Lawrence Rakestraw, *A History of the United States Forest Service in Alaska* (Anchorage, 1981), 150-152.

49 McCredie Hot Springs File, WNF/H.

50 *Ann. Rep. WNF, 1968,* 37.

51 H.E. Howes, "Willamette Power Withdrawals," March 9, 1936, WNF/H.

52 *Ann. Rep. WNF, 1968,* 3, 7. Also Dennis Roth, *The Wilderness Movement and the National Forests, 1964-1980,* Forest Service Publication 391 (U.S.G.P.O., 1984), 14-15.

53 *Ann. Rep. WNF, 1968,* 12; Parke interview.

54 *Ann. Rep. WNF, 1968,* 18; Norm Peterson, "History of the Waldo Study" (n.d.), WNF/H. David R. Gibney, "The Waldo Lake Controversy" speech before Springfield Kiwanis Club, June 2, 1962, Gibney File, WNF/H. D.R. Gibney to Regional Forester, January 12, 1968, Marion Lake File 2320-2, WNF/H. J. Melvin Hughes, *Wilderness Land Allocation in a Multiple Use Management Framework in the Pacific Northwest* (Ann Arbor, University Microfilms, 1960), 274-278, 400-409 gives a thorough summary of the issues.

55 Three studies of the French Pete controversy are valuable. Anthony Netboy, "French Pete for the People," *American Forests,* 76:5 (May, 1970), 16-18, gives a factually accurate account of the affair down to 1969. John Scott, "The Three Sisters Primitive Area," *Mazama,* 33:12 (December, 1951), 33-34, gives a full account of the 1950-1951 investigation. Hughes, *Wilderness Land Allocation,* 324-349 is a good account of the early stages of the controversy. Several accounts are written from the standpoint of the Sierra Club. These include David R. Simon, "Those are the Shining Mountains," *Sierra Club Bulletin,* 44:7 (October, 1959), 1-13, and Brock Evans, "Sic 'em Kids," in John C. Mitchell and Constance L. Stallings (ed.) *Ecotactics,* 112-114. These studies must be evaluated as one-sided rather than history. Dennis Roth, *The Wilderness Movement and the National Forests, 1964-1980,* Forest Service Publication 391 (U.S.G.P.O., 1984), 23-24, 70-74 is essentially "beltway" history—that is, history as seen from the perspective of the Washington Office, rather than the Region—and is not particularly relevant to this study.

56 Gerald W. Williams, taped interview with William Parke, WNF/H. David R. Gibney, in an interview with this writer September 29, 1985, pointed out that timber values at the time of the Parke trip were depressed, and that only Douglas-fir and white pine were valued species.

57 Parke interview.

58 Scott, "Three Sisters."

59 Land Classification, Cascade National Forest, WNF/H.

60 True D. Morse, Acting Secretary, "Decision of the Secretary of Agriculture Establishing the Three Sisters Wilderness Area, Willamette and Deschutes National Forests, February 3, 1957," WNF/H.

61 "Background: Management of the French Pete Drainage, March 3, 1971," French Pete File, WNF/H; Michael A. Kerrick, "Management Plans for the French Pete Drainage," Blue River Ranger District, June 28, 1968, French Pete File, WNF/H.

62 Simon, "These Are the Shining Mountains." The article also included distortions of the nature of the land reserved in the Mt. Washington, Waldo Lake, and Diamond Peak areas. Gibney, in the September 29 interview, stated that the Sierra Club had ambitions to create a large national park extending from the Columbia River to the California border.

63 Harold K Steen, *The United States Forest Service: A History* (Seattle, 1976); Dennis M. Roth, "The National Forests and the Campaign for Wilderness Legislation," *Journal of Forest History*, 28:3 (July, 1984), 112-125; Irving Brant, *Adventures in Conservation with Franklin D. Roosevelt* (Flagstaff, 1988), 315, 319.

64 David R. Gibney to Lawrence Rakestraw, October 23, 1985; David Burwell, comments on Gibney letter, November 4, 1985; Michael Kerrick, taped interview with Lawrence Rakestraw, December 3, 1984; Ed Anderson transcript, WNF/H.

65 Richard Noyes, "French Pete," *Sierra Club Bulletin*, 53:11 (December, 1968), 11-12.

66 Kerrick, "Management Plan." WNF/H.

67 "French Pete Intermediate Recreation Area," French Pete File, WNF/H. The plan seems to have been the result of collaboration between Brock Evans and Richard Noyes. It bears a strong resemblance to the "semi-wilderness" areas of Forest Service management in such areas as Eagle Creek.

68 "Background: Management of French Pete Drainage"; Gibney interview, September 29, 1985. French Pete File, WNF/H has a large number of petitions, declarations by various organizations, and of Forest Service evaluations of opinions pro and con. On student attitudes in general, Irwin Ungar, *The Movement: A History of the American New Left, 1959-1972* (New York, 1974), 126-129 offers a keen analysis. Mitchell and Stallings (ed.) *Ecotactics* describes and encourages

activism. "Protest," *Sierra Club Bulletin,* 54:11 (December, 1969) is informative. The Mazamas studied the issue but did not take a position on the matter until 1969. In that year they stated that many would have preferred a semi-wilderness status, but that they would abide with the Secretary's 1957 decision. They also urged the Forest Service to proceed with care in road location, making cutting areas compatible with the terrain, and preserving recreational areas. *Mazama,* 75:13 (December, 1969), 114-115.

69 Pertinent documents are located in French Pete File, WNF/H. They are summarized in "Background: Management of French Pete Drainage," Memo, March, 1971.

70 Accounts vary on the student demonstrations. Anthony Netboy, "French Pete" stated that the groups were campus radicals, and some Eugeneans regard this as being the case. Dennis Roth, in a letter to this writer, August 27, 1985, denied that the anti-war radicals were involved. Forest Service figures, in *Willamette 1969: Annual Public Report of the Willamette National Forest* (Eugene, 1970), placed the number at 500; Netboy, "French Pete" also has this figure. Both Dennis Roth, *Wilderness Movement* and Brock Evans, "Sic 'em Kids" use the 1,500 figure. Evans pointedly commented that Supervisor Gibney did not go out to meet the protesters. David Burwell stated to me that a confrontation between Gibney and the demonstrators would have led to a fight with loggers and demonstrators. Gibney pointed out that he invited demonstrators inside, but that they refused. Gibney also stated that the students were attracted by the offer of tickets to a rock concert if they demonstrated. Evans stated that the press favored the students; Gibney that the press was even-handed. Charles Connaughton, in "Recollections" told how a group from Portland State University, about 60 in number, marched on the Forest Service Regional Office. Connaughton invited them in, asked about their grievances, talked with them, showed them a slide film of French Pete, which none of them had visited, and sent them home peacefully. Such evidence as this writer has indicates that very few of the French Pete groups had ever visited the area.

71 *Oregonian,* January 17, 1970.

72 Much of this is contained in clippings, French Pete File, WNF/H. The Republican Party did not endorse either the Packwood Bill or the Forest Service plan in their March 1, 1970, Dorchester meeting; Netboy, "French Pete."

73 *Ann. Rep. WNF, 1954,* 2; *1956,* 3; *1966,* 5.

74 *Ann. Rep. WNF, 1961,* 22; *1962,* 14.

75 *Ann. Rep. WNF, 1961,* 22; *1967,* 20; *1970,* 5, 15, 19.

76 *Ann. Rep. WNF, 1972,* 16.

77 *Ann. Rep. WNF, 1972,* 16.

78 *Ann. Rep. WNF, 1962,* 13; *1965,* 10; *1967,* 23.

CHRONOLOGICAL SUMMARY, 1945-1970

1946

The Act of July 24 (60 Stat. 656) amended the Wildlife Restoration Act of 1937 by limiting the apportionment of funds to any one state to not less than one-half percent and not more than five percent of the total amount apportioned, and by permitting the use of not more than 25 percent of the Federal apportionment for maintenance of completed wildlife-restoration projects.

The Farmers' Home Administration Act of August 14 (60 Stat. 1062) provided for a Farmers' Home Administration to replace the Farm Security Administration and to assume certain functions of the Farm Credit Administration and the National Housing Agency in order "to simplify and improve credit services to farmers and promote farm ownership."

The Act of August 14 (60 Stat. 1080) strengthened the Coordination Act of 1934 by authorizing the Secretary of the Interior, through the Fish and Wildlife Service, to provide assistance to, and cooperate with, Federal, state, and public or private agencies and organizations in the development, protection, and rehabilitation of wildlife resources in the United States.

Local research centers were organized for the first time under the Southern and the Southeastern Forest Experiment Stations.

1947

The Forest Pest Control Act of June 25 (61 Stat. 177) declared it to be the policy of the government to protect all forest lands irrespective of ownership from destructive forest insect pests and diseases. It authorized the Secretary of Agriculture either directly or in cooperation with other Federal agencies, state and local agencies, and private concerns and individuals to conduct surveys to detect infestations and to determine and carry out control measures against incipient, potential, or emergency outbreaks.

The Act of July 31 (61 Stat. 681) authorized the Secretary of the Interior to dispose of sand, stone, gravel, clay, timber, and other materials on public lands exclusive of national forests, national parks, national monuments, and Indian lands. Material exceeding $1,000 in appraised value must be sold at public auction. Receipts are disposed of in the same manner as receipts from the sale of public lands.

The Mineral Leasing Act for Acquired Lands of August 7 (61 Stat. 913) authorized the Secretary of the Interior to lease acquired lands containing deposits of coal, phosphate, oil, oil shale, gas, sodium, potassium, and sulfur under the provisions of the mineral leasing laws, with the consent of the head of the department having jurisdiction over the lands and subject to such conditions as he may prescribe.

1948

The Act of February 10 (62 Stat. 19) provided that whoever, without lawful authority or permission, shall go upon any national forest land while it is closed to the public by a regulation of the Secretary of Agriculture made pursuant to law, shall be subject to fine and imprisonment.

The Secretary of Agriculture in May established the National Forest Board of Review, the name of which was changed in 1950 to National Forest Advisory Council.

1949

The Act of June 25 (63 Stat. 271) increased to one million dollars a year the authorized appropriation for the conduct of the nationwide forest survey provided for by the McSweeney-McNary Act of 1928, as amended in 1944, with a limitation of 11 million dollars on total expenditures, and increased to $1,500,000 a year the authorized appropriation for keeping the survey current.

The Anderson-Mansfield Reforestation and Revegetation Act of October 11 (63 Stat. 762) authorized a schedule of appropriations for the reforestation and revegetation of the forest and range lands of the national forests. "It is the declared policy of the Congress to accelerate and provide a continuing basis for the needed reforestation and revegetation of national-forest lands and other lands under administration or control of the Forest Service."

The Act of October 26 (63 Stat. 909) amended the Clarke-McNary Act of 1924 by authorizing (1) annual increases in the appropriation for cooperative forest-fire protection with the states up to a maximum of $20,000,000 for the fiscal year 1955 and thereafter; (2) annual increases in the appropriation for cooperation with the states in providing planting stock for farmers and others up to a maximum of $2,500,000 for the fiscal year 1953 and thereafter; and (3) an annual appropriation of $500,000 for cooperation with the land-grant colleges or other suitable state agencies in educating farmers in the management of forest lands and in harvesting, utilizing, and marketing the products thereof.

The United States Supreme Court on November 7 (338 U.S. 863) upheld the decision of the Washington Supreme Court affirming the constitutionality of the Washington law of 1945 providing for the control of cutting on privately owned forest lands.

1950

The Granger-Thye Act of April 24 (64 Stat. 82), among many other provisions "to facilitate and simplify the work of the Forest Service," broadened the authority granted the Secretary of Agriculture by the act of March 3, 1925, to accept contributions for administration, protection, improvement, reforestation, and other work on non-Federal lands within or near national forests; provided for sales and exchanges of nursery stock with public agencies; authorized the lease, protection, and management of public and private range land intermingled with or adjacent to national forest land; made available, when appropriated by Congress, an amount equivalent to two cents per animal-month for sheep and 10 cents per animal-month for other kinds of livestock under permit on a national forest for range improvements on that forest; provided for the organization of local advisory boards on petition of a majority of the grazing permittees on a

national forest; authorized the Secretary of Agriculture to issue permits for the grazing of livestock on national forests for periods not exceeding 10 years and renewals thereof; and repealed the provision of the Weeks Act of 1911 limiting contributions to counties to 40 percent of their income from other sources.

The Fish Restoration and Management Act (Dingell-Johnson Act) of August 9 (64 stat. 430) authorized the annual appropriation of an amount equivalent to the revenue from the tax on fishing rods, creels, reels, and artificial lures, baits, and flies, to be used for cooperation with the states in fish restoration and management projects up to 75 percent of the total cost of the projects.

The Cooperative Forest Management Act of August 25 (64 Stat. 473) authorized an annual appropriation of $2,500,000 to enable the Secretary of Agriculture to cooperate with state foresters in providing technical services to private forest landowners and operators and in processors of primary forest products. The Cooperative Farm Forestry Act of 1937 was repealed effective June 30, 1951.

1951

Horace J. Andrews died in a car accident on March 24th near Washington D.C. He was replaced by Charles A. Connaughton.

1952

The Smokey Bear Act of May 23 (66 Stat. 92) authorized the Secretary of Agriculture, after consultation with the Association of State Foresters and the Advertising Council, to not allow the manufacture, reproduce, or use of the name 'Smokey Bear' for profit. All fees collected by the Secretary of Agriculture from the permitted commercial use of "Smokey Bear" shall be deposited in a special account to further the nation-wide fire prevention campaign.

Lyle F. Watts resigned as Chief of the Forest Service and was succeeded on July 1 by Richard E. McArdle.

1953

The Agricultural Appropriations Act of July 28 (67 Stat. 205, 214) appropriated five million dollars to conduct studies and carry out preventive measures for the protection of watersheds under the provisions of the Soil Conservation Act of 1935.

1954

The Act of June 24 (68 Stat. 270) declared the controverted Oregon and California Railroad (O&C) lands in the indemnity strip to be O&C, which shall continue to be administered as national forest lands, and the receipts from which shall be disposed of as provided in the act of August 28, 1937. In order to facilitate administration and accounting, the Secretary of Agriculture was authorized to designate in each county an area of national forest land of

substantially equal value, revenues from which shall be disposed of under the 1937 act. The Secretary of the Interior and the Secretary of Agriculture were also directed to block up national forest and intermingled and adjacent O&C lands, exclusive of those in the indemnity strip, by exchange of administrative jurisdiction on approximately an equal-value (and so far as practicable an equal-area) basis.

The Watershed Protection and Flood Prevention Act of August 4 (68 Stat. 666) authorized the Secretary of Agriculture, under specified conditions, to cooperate with states and local organizations for the purpose of preventing erosion, floodwater, and sediment damages and of furthering the conservation, development, utilization, and disposal of water. It repealed the authority granted the Secretary under the Flood Control Act of 1936 to make preliminary examinations and surveys and to prosecute certain works of improvement on watersheds, but preserved the authority to prosecute the 11 projects authorized by the Flood Control Act of 1944 and to prosecute emergency measures under the 1938 act.

1955

The Multiple Use Mining Act of July 23 (P.L. 167) amended the Materials Disposal Act of July 31, 1947, by adding common pumice, pumicate, and cinders to the materials specified in that act, and authorized the disposal of all such materials on both unreserved and reserved public lands except national parks, national monuments, and Indian lands by the secretary of the department having jurisdiction over the lands in question. It also provided that on unpatented claims hereafter located the United States shall have the right to dispose of the timber and other nonmineral surface resources, provided that such disposal shall not endanger or materially interfere with mining operations; and it established a procedure 6, which the right to use of timber and other surface resources on existing inactive mining claims may be cancelled or waived.

The Act of August 1 (P.L. 206) repealed the provisions of the Timber and Stone Act of June 3, 1878, providing for the sale of public lands chiefly valuable for timber or stone.

1956

"Mission 66" was undertaken by National Park Service to develop recreational facilities and undertake research, a five-year, multi-million dollar project.

The Al Sarena mining scandal, prompted by alleged Department of Interior improprieties in issuing questionable mining patent for valuable timberland, becomes partisan issue.

1957

"Operation Outdoors" was undertaken by Forest Service under the direction of William Parke. This was a five-year, five million dollar program to rehabilitate and develop recreational facilities on the national forests.

1958

The "Forest Highways" Act of August 27 (P.L. 85-767; 72 Stat. 885) authorized the Secretary of Agriculture to expend funds for construction and maintenance on forest highways, trails, bicycle lanes, and pedestrian walkways on public lands. This Act recognized a need to treat roads on public lands similar to the Federal-aid highway system.

The "Fish and Wildlife Conservation" Act of September 15 (P.L. 86-797; 74 Stat. 1052) authorized the Secretaries of Agriculture and Interior to enter into cooperative agreements with State agencies to develop, maintain, and coordinate the conservation and rehabilitation of wildlife, fish, and game. The Act also authorized a public land management stamp which would be purchased by anyone who would hunt, trap, or fish on any public land within the state.

1960

The Multiple-Use Sustained-Yield Act of June 12, 1960 (P.L. 86-517; 74 Stat. 215), authorized the Secretary of Agriculture to "develop and administer the renewable surface resources of the national forests for multiple use and sustained yield of the several products and services obtained therefrom." Stipulated as multiple uses were outdoor recreation, range, timber, water, and wildlife and fish. Finally, the multiple uses were qualified as being supplemental to, but not in derogation of, the purposes for which the national forests were established as set forth in act of June 4, 1897.

1962

The McIntire-Stennis Cooperative Research Act of October 10 (P.L. 87-788; 76 Stat. 806), authorized the Secretary of Agriculture to undertake coordinated program in forestry, range, and related research. The Forestry Research Act authorized the Secretary of Agriculture to provide 50 percent matching funds for forestry research at land grant colleges, agricultural experiment stations, and state-supported graduate programs in forestry.

Rachel Carson's book *Silent Spring* published, calling attention to environmental impact of pesticides.

Richard E. McArdle resigned and was replaced by Edward P. Cliff as new Chief of the Forest Service.

1963

The Bureau of Outdoor Recreation Act constituted the organic act for newly formed Bureau of Outdoor Recreation (Interior Department), created to provide technical planning services in the recreation field.

1964

The Wilderness Act of September 3, 1964 (P.L. 88-577; 78 Stat 890) established the National Wilderness Preservation System to be composed of Federally owned lands designated by Congress as "wilderness areas." The Secretary of Agriculture was specifically charged with

responsibility for reviewing all Forest Service primitive areas for their wilderness suitability and recommending candidate areas to President within 10 years.

The Jobs Corps program was established as part of the Equal Opportunity Act of 1964 (P.L. 88-452). Numerous Job Corps Centers were established around the country, with many in the Forest Service (in later years, most of the centers were operated by private contractors) and oversight of the program by the Department of Labor. The program was designed for youth ages 16 to less than 22 at the time of enrollment, which was for two years. (The Job Corps program was reauthorized under Title IV of the Comprehensive Employment and Training Act [CETA] of 1973 [P.L. 93-203] and 1978 [P.L. 95-524]).

1965

The Highways Beautification Act established a broad range of programs affecting billboards, junkyards, and strip development along Federally funded highways, heralding a new Federal policy on aesthetic conservation.

The Land and Water Conservation Fund Act of 1965, signed into law on September 3, 1964 (P.L. 88-578; 78 Stat. 897), was enacted for "(1) providing funds for and authorizing Federal assistance to the States in planning, acquisition, and development of needed land and water areas and facilities and (2) providing funds for the Federal acquisitions and development of certain lands and other areas."

The Water Resources Planning Act of July 22 (P.L. 89-80; 79 Stat. 244) declared that it was the policy of Congress toencou rage the conservation, development, and utilization of water and related land resources. The Act established a Water Resources Council and authorized river basin commissions.

1966

The National Historic Preservation Act of October 15 (P.L. 89-665; 80 Stat. 915) declared national policy that "the historical and cultural foundations of the nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people." To this end, the act established a National Register of Historic Places (including sites, structures, and objects); a grants-in-aid program to the states; and a matching-fund program to aid the National Trust for Historic Preservation chartered by Congress in 1949.

1968

The Wild and Scenic Rivers Act of October 2 (P.L. 90-542; 82 Stat. 906) established a national system to preserve wild and scenic rivers which were to be authorized for inclusion by Congress or designated and administered by state through which they flow. Three-tiered system of classification created: Wild, scenic, and recreational. Criteria for inclusion in the system were established for each classification category. In Oregon, portions of the Rogue and Snake Rivers were included and in Washington, portions of the Skagit River were included in this Act.

The National Trails System Act of October 2 (P.L. 90-543; 82 Stat. 919) created a national trail system based on three trail categories: State and metropolitan trails, national recreation trails, and national scenic trails. Provided for "instant" designation of Appalachian and Pacific Crest trails and for study of 14 other trails for possible inclusion in the system.

Chapter VI
ERA OF CONFLICT AND CONFRONTATION, 1970-1988

INTRODUCTION

The history of the Forest Service in the period 1970-1988 was one of dramatic change and heated controversies. The Willamette National Forest was affected by these changes and was a center for a number of controversies, some of which still persist. In part, these changes were due to changes in the nature of American society itself. They include a growing urbanization, and with this urbanization a tendency to look upon the land as a playground rather than as a producer of goods and services. In part they represented a change in the tactics, make-up, and effectiveness of pressure groups. Other changes were those within the Forest Service itself. They represented both a growing diversification of the tasks of the Forest Service, and the difficulty of maintaining the traditional approach to resource management. We will examine each of these phenomena as applied to the national scene, and then as applied to the Willamette National Forest.

SOCIETAL CHANGES

The growth of an urban population—it reached 70 percent nationally by 1985—meant that an increasingly large number of people were life-long city dwellers who had no economic ties to the land. Also, a growing number of people were from heavily populated areas outside the Pacific Northwest. Plus there was an increasing interest among native and long-term residents in the naturalness of the mountains and streams that they so long took for granted. There was, in much of their writing, a lack of understanding or sympathy with the timber industry; and an assumption that if loggers lost their livelihood, it made no great difference.

In the Pacific Northwest, native Oregonians dwelling in cities had generally held a holistic view of the management of forest lands. Urban groups played a large part in creation of the first forest reserves, recognizing their values for recreation, city watersheds, and aesthetic and scientific study, for developing forest trails and highways, and in working with managerial problems. Loggers kept ties with the small towns and city; while they worked in lumber camps, their wives stayed in town. The city was the main supply center for goods needed by the rural groups; the country was the source of food and building materials used by the city dwellers. With the development of power saw logging and truck hauling after World War II, loggers worked in the woods and lived in towns, but the ties between rural and urban areas were kept alive by farmer's markets. During the New Deal, the mutual dependence of city and farms was evident in the programs for sustained yield units in the timber industry, and for forest communities in Oakridge and Westfir. [1] Generally speaking, the citizenry recognized the purposes in managing forest lands as being Samuel Trask Dana's phrase, "The management of forest lands for the continuous production of goods and services—an art based on science and practiced with regard to social and economic considerations." [2]

Major changes in the population occurred in the last third of the twentieth century. One change was the movement of summer home owners and retirees into the river valleys of the Willamette National Forest. Their general way of life and outlook toward the forest was often at odds with

those of the established residents. They looked upon the forest as something to be managed primarily for social considerations rather than economic ones—that is, for recreation and aesthetic values rather than for timber production. The influx of Californians has been blamed for a great many of Oregon's woes, and in this case there is probably some truth to the accusation. In California the forests were used more for recreation than for timber production, and opposition to the Forest Service was traditional in many areas, and confrontation was a way of life. [3]

Closely related to this influx was the growth of colleges and universities in Oregon; particularly the University of Oregon. In the previous chapter mention has been made of the activist groups that grew up in connection with the University. Such groups persisted, occasionally picketing the Eugene Forest Supervisor's Office in the Federal Building and passing out pamphlets. Though the presence of such groups, "noisy, often ill-informed, litigious and hell-bent on confrontation" continued, there was some change in the make-up and tactics of the groups after 1970. A part of this change came from the development of programs in environmental education in the 1970s, analogous to the development of programs in conservation education in the first half of the century. The earlier programs tended to channel the activities of students into scholarly rather than emotional outlets, and led many people to seek methods of working within the existing system rather than trying to force change in it. [4]

There were far-reaching changes within the Forest Service as well. One change was a bewildering succession of legislation, appeals, litigation, and directives designed to clarify its tasks, and to settle legal issues. (See the Chronological Summary of each Chapter for a listing of the important laws.) The Federal legislation was paralleled by state legislation, designed to further Federal-state cooperation in such areas as wildlife management, research, and timber management. The growth in appeals and litigation, especially in the late 1970s and 1980s, has been spawned by the special interest groups. Generally, the environmental groups found that working through the local District Ranger or Forest Supervisor was often unproductive from their point of view. Part of this was because they tended to deal with national issues, such as wilderness, spotted owl, and old-growth that could not be settled or resolved at the local level. These groups found that the best approach to resolving their concerns has been through the legal system and Congressional actions. In contrast, the timber industry for decades had worked very well with the local District Ranger or Forest Supervisor to get satisfaction on particular project concerns. Only during and after the first Roadless Area Review and Evaluation (RARE) did the timber industry get heavily involved at the national and Congressional levels, as well as using the legal appeals and litigation to resolve their concerns.

There were a series of national level power struggles, particularly within the Carter and the Reagan administrations. They were marked by interagency and intra-agency struggles for influence. The one struggle occurred over the increased commercial pressure on national forests, which foresters thought could be met with increasing intensive management, coupled with increased demand by environmentalists and social groups that timberland be taken out of commercial production. In the words of one writer, "Instead of arriving at mutual accommodation, policies and actions have veered from one extreme to another, and exchanges between factions have grown increasingly acerbic and accusatory." Another struggle revolved around a push by the Carter administration to combine the Forest Service with other land

management agencies in the Department of the Interior into a super Department of Natural Resources. This effort, as with others since the 1920s, was doomed to failure. Lastly, there was an effort in the Reagan administration to sell unneeded Federal land, especially USDI Bureau of Land Management (BLM) grazing land in the Rocky Mountain states. Another proposal in late January, 1985, was to join the Forest Service and BLM offices in areas where it seemed practical and efficient. In Oregon, this proposal meant that the BLM administered O&C lands would be brought under management of the Forest Service, with several changes to Forest and Ranger District boundaries to make administration of the land and resources more efficient. This proposal was greeted with much glee by real estate brokers and others in the administration, but almost total shock by the Congressional staffs and communities where the lands were to be changed. The end result, after a series of public hearings and an extensive public outcry, was that by the late summer of 1985 the proposal was put on the "back burner" by Interior Secretary Donald Hodel and Congress. [5]

There were also changes in the make-up of the Forest Service itself which presented new problems for forest management. The aim of the Forest Service was holistic forestry, that is "management of the entire forest environment, including both market and non-market resources." Holistic forestry holds the promise of successfully combining management of the commodities (wood, water, and forage potential), protection of wildlife and fisheries habitat, outdoor recreation, and aesthetics. It is "the management of forest lands for the continuous production of goods and services, an art based on science and practiced with due regard to economic and social consideration."

Foresters had these aims in mind from early times, and the National Forest Management Act of 1976 (NFMA) expressed this balance. As the management has become more complex, specialization has occurred. Forest Service now has its own resource specialists—soil scientists, range conservationists, recreation managers, and a sprinkling of social scientists. (See Appendix for the range of jobs filled on the Willamette NF in the spring of 1988.)

It is the professional forester manager who must provide the integrated forest management—that is, the continuous yield of desired commodities with due consideration for social and environmental values. The task is in some ways easier, since the managers can call on experts; but the presence of experts may make the task more difficult. A major reason for the Forest Service's success in the past has been the fact that forestry education, meeting high standards set by the Society of American Foresters (SAF), gives the school trained foresters a common set of values, adherence to a common background, a set of professional ethics, and a great deal of professional pride. Ideally it provides the holistic point of view needed for successful forest management. [6] A great many of the new specialists were not forestry graduates and were loyal to their own disciplines or interest groups rather than to the practice of forestry and to the Forest Service as an organization. These were commonly thought of as obstacles to developing a holistic viewpoint, but today it is apparent that these new specialists have given a new direction to national forest management. They have brought new ways of looking at the forest and new ways of doing things into the mainstream of forest management. These new specialists have created a new dynamic that is considerably different from the older forester/engineer generation. It remains to be seen if these new members of the Forest Service will create a better, more responsive agency in the future. [7]

ADMINISTRATION

Forest Service Chief Edward P. Cliff retired in 1972, just when the Forest Service was beginning to feel the heat from a wide variety of critics. Cliff was replaced by John R. McGuire, an Associate Chief with long experience in research. McGuire served admirably during this environmental era, and was an important force in helping Congress write several important laws dealing with national forest management: Resources Planning Act (1974) and the National Forest Management Act (1976). McGuire retired in 1979 and was replaced by R. Max Peterson. An engineer by training, Peterson spent several years in the Washington Office dealing with Congress and proposed legislation before his appointment as Chief. In addition, he spent much of his time as Chief trying to deflect the many harsh criticisms of the Forest Service by many groups that wanted their piece of the resource pie. Probably most important was his even handed dealings with Congress concerning the disposition of the remaining roadless areas in the national forests. Peterson retired in 1987 and was replaced by F. Dale Robertson who worked for a number of years in the Southern Region and the Pacific Northwest Region. Robertson served as Forest Supervisor for the Siuslaw and Mt. Hood National Forests before going to the Washington Office as Associate Chief in 1980. Tides of national policies were reflected in the Region and in the Willamette Forest.

Charles A. Connaughton retired as Regional Forester in 1971 and was succeeded by his deputy, Rexford A. Resler. Resler, a native of Illinois, was educated at Oregon State University, earning his B.S. in 1953, and his Masters in 1954. He served with the Army Air Corps during World War II, and began work with the Forest Service in the Deschutes National Forest in 1950 as a forest aide. Subsequently, he worked on the Siuslaw and Rogue River National Forests, and on the Willamette where he became Deputy Supervisor in 1962; he became Supervisor of the Malheur in 1965. In 1968 he went to the Washington Office working in the recreation division, then was reassigned as the assistant director of timber management. In 1970 he became Deputy Regional Forester in the Pacific Northwest Region and the following year became Regional Forester. He was faced with implementing the new National Environmental Policy Act of 1970 and the Clean Air Act of 1970. In early 1972, the Region and the Forests began a controversial public review of the remaining roadless areas (RARE). In 1972 Resler was transferred to Washington as Deputy Chief, retiring in 1978. He was replaced by Ted Schlapfer.

Theodore A. Schlapfer, a native of New Jersey, was a 1943 graduate of the University of Georgia, and served for three years in the United States Navy before entering the Forest Service. His early work was in the Pacific Southwest (California) Region. In 1959 he was appointed Supervisor of the South Tongass National Forest, and in 1963 became Supervisor of the Black Hills National Forest, South Dakota. Between 1965 and 1968, he was assistant director of the division of recreation of the Forest Service in Washington, DC. He was appointed as R-6 Regional Forester in 1972, where he became involved in the RARE analysis and recommendations for wilderness in the Region. A final environmental impact statement (EIS) was produced by the Washington Office in late 1973, but it did not resolve the issue. In addition, Congress passed the Resources Planning Act (RPA) in 1974, the Monongahela decision against clearcutting in West Virginia was upheld by the courts in 1975, the National Forest Management Act (NFMA) was passed in 1976, and a new roadless area review (RARE II) was begun in 1977.

Schlapfer retired in 1977 to take on consulting work dealing with natural resources at Lewis and Clark College in Portland. He was succeeded by Dick Worthington.

Richard E. Worthington, a native of Oregon, was a 1950 graduate of Oregon State University. He served with the U.S. Army Air Corps from 1943 to 1946. He worked in the Umpqua, Rogue River, and Mt. Hood National Forests, where he became deputy Forest Supervisor. In 1965 he was transferred to the Olympic as Supervisor, and in 1968 became Supervisor of the Klamath National Forest. He was promoted to the Regional Forester's staff in the Pacific Southwest (California) Region in 1970 as Assistant Regional Forester, becoming Deputy Regional Forester in 1971. In 1972 he was returned to Washington, DC, and became director of the division of timber management. He became the R-6 Regional Forester in June of 1977. Worthington faced the continuing RARE II controversy even after the publication of the final EIS in 1979 and the beginning of the regional and forest planning efforts under the mandate of the NFMA. In addition, the Regional Office put together a team to prepare an EIS on the proper use of herbicides in forestry. This document was produced in 1978, but immediately came under fire from newly formed anti-herbicide groups. In response, the Region in the spring of 1979 chartered a new team to evaluate other methods of treating competing and unwanted vegetation. A final EIS was published in 1981. A rather unexpected natural event occurred in the spring of 1980, when Mt Saint Helens awakened and on May 18, 1980, it erupted in a fury, scattering tons of ash across Washington and dust around the world. The Regional Office scrambled to evaluate the disaster, provide assistance to communities, make ready for President Carter's visit, and prepare a plan for the management of the mountain. In 1982 Worthington retired, and was succeeded by Jeff Sirmon.

Jeff M. Sirmon, a native of Alabama, graduated in 1958 from Auburn University with a degree in engineering. Sirmon served as forest engineer in various positions from 1958 to 1963. In 1963 he was transferred to R-5, and in 1969 to the engineering division of the Washington Office. Three years later he was named Assistant Regional Forester for the R-1 in Missoula. In 1974 he became Deputy Regional Forester for the Intermountain Region (R-4) and was promoted to Regional Forester in 1980. He was appointed as Regional Forester for R-6 in 1982.

One significant problem that Sirmon had to address as Regional Forester was the so-called "Timber Depression." During the late 1970s and early 1980s, the timber industry was expecting that the national inflation would continue, higher prices would be paid for their wood products, and that the NFMA forest planning effort and the RARE II controversy would reduce the available supply of timber. Thus, they tended to overbid on timber sales, betting that the law of supply and demand would make up for the high prices on national forest and BLM timber. When the interest rates soared to near 20 percent, housing demand fell, and the wood products market shrank to almost nothing, yet the companies still were under legal contracts to log and pay the high prices. After getting little satisfaction from the Regional Office, the industry was more successful at the Washington Office to delay the harvest of these high bid sales to avoid going into default. Eventually, Congressional action was necessary to relieve the industry from going bankrupt. After months of negotiation, as well of threats to have the National Park Service take over Mt Saint Helens, the Mt. Saint Helens National Volcanic Monument was established in 1982. He also faced numerous legal actions against the RARE II study and the new Regional Guide (1984). After questions arose from the timber industry about the adequacy of Forest

planning, he stoppped the effort to allow time to study the problems and come up with Region-wide solutions. In 1983 and 1984, there were efforts to resolve the roadless area question through Congress, and after months of negotiation, the Oregon and Washington Wilderness Acts were passed in June of 1984. Sirmon also faced an administration effort in the spring of 1985 to transfer or interchange certain BLM and Forest Service lands in Oregon. Sirmon transferred to the Washington Office in the fall of 1985 as the Deputy Chief for programs and legislation. He was replaced by Tom Coston.

Charles T. "Tom" Coston, a native of North Carolina, was a forestry graduate of the University of Montana in 1955. He served with the U.S. Army in 1955-56, starting with the Forest Service on the Lolo National Forest. After serving in the Regional Offices in R-1 and R-4, Coston was named as the Deputy Forest Supervisor on the Boise National Forest in 1970, then Forest Supervisor of the Bridger-Teton National Forest in 1971. He went to the Washington Office in 1975 before returning to R-1 in 1977 as Deputy Regional Forester for resources. Two years later Coston was appointed as Regional Forester for the Northern Region (R-1). After his appointment as Regional Forester in R-6, Coston unexpectedly retired after a few months and was replaced in 1986 by Jim Torrence. [8]

James F. Torrence, a native of Iowa, graduated from Iowa State University in 1955, then started with the Forest Service on the Ochoco National Forest. In 1956-58, he served with the U.S. Army Signal Corps, then returned to the Ochoco and on to the Wallowa-Whitman and Winema Forests, then to the Regional Office to work on environmental impacts statements. In 1972-1974, he served at the Washington Office dealing with developed and winter sports recreation sites, then in 1974-1977 he was the Forest Supervisor on the Superior National Forest in R-8. He was appointed as Deputy Regional Forester for resources in R-6 in 1977, leaving in 1983 to become Regional Forester in Region 2. Torrence came back to Region 6 as Regional Forester in the spring of 1986. Torrence faced the controversial proposal to have portions of the Columbia River Gorge established as a scenic area. After considerable opposition, including the Office of Management and Budget, President Reagan signed the Columbia River Gorge National Scenic Area into law in November of 1986. In addition, there was the terrible fire situations in 1987, the publication of the first NFMA Forest Plans in 1987, the Oregon Wild and Scenic Rivers Act of 1988, and in 1987-88 Regional efforts to address through EISs the very controversial spotted owl habitat and the management of competing and unwanted vegetation. [Torrence retired in August of 1989 and was replaced by John F. Butruille, former R-6 Deputy Regional Forester for resources.]

On the Willamette National Forest, Zane Grey Smith, Jr. became Supervisor in 1970, serving until 1974. A graduate of the University of Montana, he also studied at Cornell. He had worked with the Job Corps in Washington, DC, and had first become Deputy Supervisor, then Supervisor of the Sierra National Forest, California. He also worked at the Job Corps training center at Cispus in Region 6. Zane Smith was Forest Supervisor when the National Federation of Federal Employees (NFFE) Local 457 won, by election in April, 1973, the right to exclusive representation of the 500 or so non-managerial employees working for the Willamette's seven Ranger Districts (the Supervisor's Office had been represented by NFFE since 1967). In March, 1974, the Willamette became the largest national forest unit to be represented by the NFFE union. At the contract signing ceremony, Zane Smith noted that "we welcome this new alliance

between labor and management which promises to maintain and improve the level of Forest Service performance. We must seek new ways to improve employee communications and to promote better conditions under which employees accomplish their work. Our union can be a significant step towards the realization of these needs." Smith was succeeded in 1974 by Jack Alcock.

John E. Alcock had previously served as Supervisor of the Daniel Boone National Forest, Kentucky, and Green Mountain National Forest, Vermont. His experience also included work as Director of the Jobs Corps Center in Ripton, Vermont and work on national forests in Indiana, Missouri, and Wisconsin. [9] During Alcock's tenure, the Supervisor's Office moved in February, 1975, from the old location at 210 E. 11th Avenue in downtown Eugene to the new Federal Building on High Street between 6th and 7th Streets.

Michael A. Kerrick became Supervisor in 1980. He graduated from the School of Forestry of the University of Minnesota in 1954. He was on old-timer in the Willamette National Forest, having begun work there as a student on the South Fork of the McKenzie in 1952, mapping the country in preparation for timber sales. In 1953 he laid out timber sales on Quartz Creek in the H.J. Andrews Experimental Forest, and in the Blue River area. In 1959 he went to the Mt. Baker National Forest, returning to the Willamette in 1966 as timber management assistant, and then as District Ranger in Blue River in 1968. In 1974 he became deputy Forest Supervisor of the Mt. Hood National Forest, moving on to Supervisor of the Coconino National Forest in 1976, and returning to the Willamette as Supervisor in 1980. [10]

ORGANIZATIONS

The 1970s and 1980s were marked by persistent efforts to analyze the nature of the varied groups of people the Forest Service dealt with, and to foster public participation in decision making. Controversies, then and now, tend to be emotional. At hearings on Terwilliger Springs management, which dealt in part with public nudity, the Forest Service plans were characterized as both communistic and fascist. In meetings dealing with herbicides, the Forest Service was accused of trying to poison yet unborn children and cause miscarriages. Arguments over oral vs. sealed bidding on timber sales were abrasive, and debates over wilderness vs. multiple use (not "locking up the land"), as well as below-cost timber sales, often generated more heat than light. Environmentalists asserted that Forest Supervisors should be chosen from outside the ranks of foresters—an assertion that critics put on a par with suggestions that physicians should have no medical training. Environmentalists asserted that the timber industry was "in bed" with the Forest Service, to which an industry spokesman replied that if that were the case, "it was the industry that was getting screwed." Some of this seems like an old tune, newly orchestrated. Views of the Cathedral Forest Action Group and Oregon Natural Resources Council that their rights to use the land were superior to those of either government or private ownership are reminiscent of the arguments of "tramp" sheepmen, in asserting their grazing rights in the Lakeview area of Oregon. Sabotage by wrecking machinery or driving spikes into trees was used by the IWW (Industrial Workers of the World) in the World War I period. The IWW called it sabotage; today its proponents call it "environmental activism." [11]

"Good terminologies reveal differences; bad ones conceal them." Since the term "environmental" is used by a great variety of groups, some with totally differing points of view, it is desirable to develop a consistent terminology for defining them. Here, environmental/social is used to define those groups whose interest in the environment is primarily for recreation and aesthetic purposes, like the Sierra Club, the Oregon Natural Resources Council, the National Wildlife Association, or the Audubon Society. Environmental/production is used for those groups whose interest in the forest is primarily as a source of production, such as the various timber associations or woodland owners; environmental/holistic/production is used for groups and organizations who think of the forest as being managed "for the continuous production of goods and services—an art based on science and practiced with due regard for its economic and social considerations." Such groups include the American Forestry Association, the Society of American Foresters, or the Forest Service as an agency.

There were changes among these groups. The Mazamas, formerly the most important of the Oregon groups, largely confined their activities to mountain climbing and did not take a part in the controversies. A civil, "gentlemanly" group, many of them were offended by the confrontational tactics of the more militant. The Sierra Club, while not cutting its ties to the militant groups, publicly moved toward a center-of-the-road position. After Brower's ouster as president, they saw more to gain in a posture of moderation. An umbrella organization, at first calling itself the Oregon Wilderness Coalition, then changing the name to the Oregon Natural Resources Council, incorporated most of the local, Oregon-based groups, initially following the lead of the Sierra Club, but then becoming more independent and finally at odds with the Club over some important issues. Timber land owners maintained their traditional organizations, but adopted more effective means of presenting their points of view through ever more vocal lobby organizations and associations, such as the North West Timber Association, Northwest Forestry Association, Western Forest Industries Association, and the Willamette Timbermen Association.

There were also groups on the fringe of the recognized ones. On the radical right were those people who believed in "privatization," a philosophy based on turning the public lands over, by sale or gift, to private individuals. Termed by one of its proponents "free-market capitalism," it involved selling the public lands except for national parks and national wildlife refuges to the highest bidder. It was argued that public land management of public lands was disgraceful, and that the remedy was to sell off the land. The privatization arguments had some support from the Reagan administration but were viewed usually as a land grab. They had some support from University of Oregon professors, notably William C. Mitchell. [12]

On the radical left were those who advocated, and sometimes used, tactics of passive resistance and sometimes industrial sabotage to economic activities, largely the cutting of timber. Their tactics included parading with signs in front of the Regional and several Supervisor's Offices, blocking entry into the Offices, building platforms in trees and living on them to prevent the cutting of the trees, blockading roads to timber sales, driving spikes into trees, wrecking logging machinery by draining the oil out of the motors and then starting the engines. Increasingly, these groups found rationalizations for their actions from courses in, and writings on, environmental ethics which justified use of these methods on the grounds that ethics transcend law, and that, as one person put it, "It takes outlaws to stop outlaws." [13]

A partial list of the organizations active in the controversies 1970-1988 includes the following:

I. National Groups - Environmental/Social

-American Alpine Club
-Audubon Society
-Izaak Walton League of America
-Natural Resources Defence Council
-Nature Conservancy
-Sierra Club
-Wilderness Society
-Wildlife Society

II. National Groups/Associations - Environmental/Holistic/Production

-American Forestry Association
-Society of American Foresters

III. Regional Groups - Environmental/Social

-Bella Abzug Garden Club
-Cascade Holistic Economic Consultants (CHEC)
-Cathedral Forest Action Group
-Central Cascades Conservation Council (founded 1973)
-Corvallis Environmental Survival Center (students)
-Earth First!
-Eugene Natural History Society
-Hardesty-June Wilderness Council
-Hardesty Mountain Avengers
-Mazamas
-Middle Santiam Wilderness Council
-Native Plant Society of Oregon
-Obsidians
-Oregon Environmental Council
-Oregon Guides and Packers
-Oregon Natural Heritage Data Base
-Oregon Natural Resources Council
-Oregon Rivers Council
-University of Oregon Survival Center (students)
-Waldo Wilderness Council

IV. Regional Groups/Associations - Environmental/Holistic/Production

-Association of O&C Counties (Western Oregon counties)
-Concerned Citizens of Western Lane County (Florence area)
-McKenzie Guardians (McKenzie River area)

V. Lumbermen Associations - Environmental/Production

-North West Timber Association
-Northwest Forestry Association
-Northwestern Lumbermans Association
-Oregon Women for Timber
-Western Environmental Trade Association
-Western Forest Industries Association
-Willamette Forestry Council
-Willamette Timbermen Association

There were shifts in the relationships of guild organizations with the Forest Service. Relations with the Sierra Club became less abrasive. In part this was because the controversy over wilderness area designation had largely shifted to the political arena. In part it was because Zane Smith took steps to lessen the focus on French Pete. The Sierra Club, which in the past had reported favorably on direct action tactics, now backed away. As Sierra Club leader Holway Jones of the University of Oregon wrote, it was fantasy to undertake ecological sabotage "without an underlying set of principles." On the other hand, Andy Kerr of the Oregon Natural Resources Council gave them approval. Kerr remarked, "Earth First! is on the cutting edge of the conservation movement. They are precursors of things to come if the Agency doesn't change its policies in this matter [timber sales]...Dismissing Earth First! as too radical is similar to dismissing Martin Luther King as too radical at that time." Industry spokesmen had the view that the established outdoor groups encouraged the militant groups. As Dennis Hayward with the North West Timber Association said, "I think the preservationists are sitting back and saying we don't want to perform in that way, but my God, you guys, keep up the static, keep that issue before them, make the people forget we passed a Wilderness Bill. I think they're using the radicals to keep this issue alive." [14]

In dealing with these groups, the Regional Office and the Willamette Supervisor's Office tried a variety of approaches, some old, some new. In the midst of turmoil, the Forest Service continued, with success, its work of informing the public and securing cooperation and approval. Programs for children and young adults were highly successful. These included the Smokey Bear and Woodsey Owl programs; involving Boy Scouts and 4-H groups in tree planting and other activities; and, after 1960, environmental education workshops. The Federally funded Job Corps work (JCC), the Youth Conservation Corps (YCC), the Young Adult Conservation Corps (YACC), and the Neighborhood Youth Corps (NYC); conservation education workshops; were successful in teaching young people basic principles of good land use. These programs did not arouse the public interest that the controversies of the period stirred up, but were probably in the end more significant. [15]

Zane Smith called on University of Oregon scholars Richard P. Gale of the Department of Sociology and Phyllis M. Ford of the Department of Recreation and Parks Management, as well as Paul B. Beistel of the Lane County Board of Parks and Recreation, for judgements on the future of recreation. Gale recognized the variety of demands for various recreational groups, but pointed out that meeting each new demand created new ones—i.e., more trailer campgrounds tended to encourage more people to shift from tent camping to trailers. He felt that state, private,

and BLM lands should help to meet the demand for more recreational land. Beistel described the "automization of society into a proliferation of special interest groups" with each "insistent on its own objective to the exclusion of the objectives of others." Ford categorized the various types of recreation seekers into six groups—solitude seekers, motor enthusiasts, adventurers, naturalists, anglers and hunters, and car campers. Each was in conflict with the other groups, and often, when one set of people became accustomed to using a given area, they conflicted with others of their group who moved into "their" territory. Zoning was a possibility for eliminating friction. Other sophisticated methods were used to take the pulse of the public and to analyze the nature of the groups. These involved the use of sociologists and university students to study socio-economic changes in the river valleys. Linda J. Peterson, a sociologist and a member of the Willamette National Forest planning team, studied the upper Santiam, McKenzie, and Willamette River Valley areas, especially the small forest-dependent communities. Richard Wilen, a cooperative work study sociology student, made a study of the McKenzie River Valley. Both found large changes in the population, with a growing division between the groups making a living from wood products and the retirees and summer home people. [16]

Under Forest Supervisor Smith, a complex planning process was initiated for long-range Forest planning during the fall of 1973, when a draft publication "Issues and Concerns" was distributed for public comment. Only 140 responses were received. On March 8, 1974, the Willamette released a document entitled "Situation and Assumptions" to the public to comment on regarding future management of the Forest. A lengthy draft environment impact statement (EIS) was released on January 8, 1976, for public review and comment in Forest Supervisor Alcock's tenure. A number of public meetings were held in the communities surrounding the Forest. The final EIS was released on April 18, 1977.

The EIS contained a great deal of information from the more than 2,600 postcards and letters received in response to the draft EIS from the various groups in the Willamette National Forest. Of the responses received, 727 were from the Eugene-Springfield area, 161 from Salem, 124 from the Albany-Corvallis area, 69 from Portland, 350 from various communities within or adjacent to the Forest, 471 from other places in Oregon, 45 from Washington and California, and 96 from the other states. For 387 responses, a location of origin could not be identified. The largest single form of response was from the Willamette Timberman's group which sent in 1,626 postcards. The majority of comments were expressed by the public that was most directly affected by the Willamette's timber output. The comments regarding Forest Service land management ranged from the need to protect job opportunities, maintain the allowable cut at present levels, prevent wasting of valuable resources, and strong support for multiple use management. [17]

Implementation of the 1977 Land Management and Timber Management Plans began in the same year. Basically, the plans called for a timber harvest of 636 million board feet of timber (down about four percent), establishment of seven roadless recreation areas, expansion of the Waldo Lake Recreation Area, three new research natural areas, four new special interest areas, 31 old growth groves, three wilderness areas, ten dispersed non-motorized recreation/timber areas, two dispersed motorized recreation/timber areas, reduction of scenic influence I and II areas, and the retention of existing campgrounds, organizational sites, and winter sports areas. These land uses have been effectively used as the basis for land management activities until

approval of a new plan, drafted under the guidelines of the National Forest Management Act of 1976 (NFMA).

Supervisor Kerrick was particularly interested in getting views from all segments of the public. Beginning in 1984, Jerry Mason, public affairs officer, undertook a series of interviews with leaders of key "stockholders" groups in the area. The interviews were conducted with a great deal of skill and included representatives from the militant environmental groups; representatives of associations from both the small lumberman's associations and the larger ones; U.S. Representative James Weaver; Regional Forester Jeff Sirmon; and an industrial consultant. The interviews are valuable historical documents, representing a variety of points of view. They indicate a growing polarization between environmental groups, and members of the industries dependent on logging, and the forest communities. Representatives of the environmental groups complained that the Forest Service was too much devoted to timber production; that Assistant Secretary of Agriculture John Crowell was a major villain in the picture; that harvest of old-growth timber should cease, and that the timber industry was of lessening importance both nationally and regionally. Timber industry representatives complained about the fact that while they claimed to be spokesmen only for the industry, environmental groups claimed to be spokesmen not only for their own groups, but for the general public as well. Representative Weaver felt that the Forest Service was going in the wrong direction in regard to timber harvest, and placed much of the blame on John Crowell. There was, he felt, need for the Forest Service to end its use of herbicides. He was, on the other hand, critical of the militant groups who used techniques of sabotage. [18]

Beginning in 1980, the Willamette began a process to develop a new forest plan under the NFMA regulations. The planning group that put together the 1977 plan was essentially enlarged with the addition of several new members, including an economist and a computer analysis to run the very complex FORPLAN model. Other specialists, including cartographers, a wildlife biologist, landscape architect/recreation planner, timber planner, sociologist, public affairs coordinator/writer, and an interdisclipinary team leader, all under the direction of Rolf Anderson, planning staff for the Willamette.

After many delays caused by changing administrations, new Washington and Regional Office direction, new laws and regulations, and the complexities required by the FORPLAN model, the draft EIS for the new plan was made available to the public for review on December 7, 1987. The public comment period ended on May 16, 1988, after a series of 120 public meetings, displays, and presentations at various community meetings by the planning team and management team members. Ten of these were open houses at the Supervisor's Office and Ranger Districts. Seven displays were held at community centers in Lane, Linn, and Marion Counties. The remainder were meetings with various groups associations, Federal, state, and county agencies and officials, schools, and other group meetings.

The Willamette NF received over 17,500 responses to the draft EIS and proposed forest plan. The majority of responses (15,999) were submitted by individuals or their families. Businesses or business groups mailed in 95 responses; timber industry businesses sent 68 responses; city, county, and state elected officials with 30 responses; conservation/environmental groups sent 28 responses; followed by civic groups with 19 responses; recreation groups with 17 responses;

associations and unions with 15 responses; academia with nine responses; Federal agencies with five responses; professional societies with four responses; county and state with three responses; and five miscellaneous responses. The vast majority of responses were sent from cities in western Oregon, with Eugene leading with 4,280 responses, followed by Springfield (1,142), Lebanon (726), Portland (619), Salem (574), Corvallis (525), and Cottage Grove (500). In spite of the large number of responses, they amounted to less than five percent of the population in the three primary counties of Lane, Linn, and Marion. However, they were informative of the people that were concerned about the present and future management of the Forest.

Several of the interest groups devised their own response form to respond to the Willamette DEIS and "skew" the results to their favor. The most prominent was the Willamette Forestry Council (WFC) which solicited various timber companies and their employees to fill out the WFC response form. The WFC form referred to a specific alternative that they called the "Willamette Multiple Use Alternative," which proposed to increase timber harvest and to eliminate all remaining roadless areas. They were able to generate 19,324 comments (seven comments per form letter) using this form. The Oregon Natural Resources Council (ONRC) also developed their own alternative, which proposed to keep all the roadless areas, protect all spotted owls, and reduce the timber harvest. They used this alternative to develop a form letter, which they distributed to many of their affiliated groups. A total of 19,282 comments (17 to 22 comments per form letter) were received on the ONRC form letter.

Of the nine alternatives presented in the DEIS, the Willamette's preferred alternative had only 784 positive comments, with 18,808 negative comments and 44,075 saying that it needed modification. This alternative proposed to reduce the timber harvest from previous levels, protect some of the spotted owl areas, and to eliminate most of the roadless areas. The other alternatives received few comments considering the 177,701 identified public comments received. The resources that were of primary concern to those who responded were: Timber resource/harvest (39,058), old-growth areas (18,944), roadless areas (17,674), economic considerations (15,001), wild & scenic rivers (13,501), and recreation (11,232). [19]

The Willamette National Forest did have some notable successes in the area of public involvement. One concerned Terwilliger Springs. This hot spring area is located just west of Cougar Reservoir about a quarter of a mile off Road 19. It was discovered in the late 1800s by Hiram Terwilliger, who first filed on, then abandoned, a cinnabar claim there. The spring area consisted of the spring and a series of soaking pools. The spring area was little frequented until the Cougar Dam was completed. During the 1960s and 1970s the spring area became used, often by a rather motley crowd. The area became littered; garbage collected and chemical toilets provided by the Forest Service were vandalized. Nude bathing was popular at the springs, but nudity became extensive on the road as well. The area became a hangout for "hippie" groups. Theft from cars left by visitors in the nearby parking area became common.

In 1978-1979 a series of studies were made by the Forest Service. A posted trail was built into the area and composting toilets set up. Nudity was prohibited on the roads, and camping prohibited in the parking lots. However, the situation deteriorated. Alcohol and drug abuse became common; various cult groups, motorcycle gangs, and ex-convicts made the springs a

hangout; nudity increased, and armed robbery and theft plagued visitors at the vehicle parking lot.

In 1982 a thorough study was made by James L. Caswell, Blue River District Ranger, with Chuck Anderson, a Forest Service employee. They considered a series of options, ranging from closing the springs by diverting the water, Forest Service management with a user's fee, commercial management, and turning the springs over to a non-profit organization, Friends of the Springs, to regulate its use. Of the opinions presented and voted on by interested people, a plurality favored the Friends of the Springs approach.

In May 1982 a special use permit was issued to the non-profit organization, Friends of the Springs trust. The organization agreed to have a caretaker present to keep up the toilets, keep trails cleared, manage a small camping area, and cooperate with the Forest Service in building wooden decks around the pools and protecting the soil. A caretaker's cabin was built. The experiment appeared to work successfully, at least for the first two years it was in operation. [20]

A second area of success was in what Jerry Mason called "seeking consensus in the Willamette." The program, initiated by Robert Chadwick of the Regional Office, involved bringing together groups representing various points of view to talk out and reconcile differences, and to reach areas of compromise. In 1981 the Willamette held a series of week-end meetings to try to reach a consensus on various matters such as the management of old-growth timber stands. The meetings had as participants an equal number of people from the Forest Service and from the guild groups. The technique was highly praised by Senator Hatfield, the Obsidians, and the Audubon Society, among others, as a means of working out accommodations.

One of these accommodations involved the management of the land along Highway 19, just to the west of the Three Sisters Wilderness. This was not a wilderness, but was used a great deal by recreationists. The Willamette land management plan (1977) had tried to strike a balance between timber harvest and preservation of scenic values. Various groups and individuals: Richard Noyes of the Sierra Club, a leader in the French Pete affair, and members of the Obsidians, the Oregon Natural History Society, Friends of the Three Sisters, and others groups discussed alternatives, made a field examination, and finally reached an accommodation with the Forest Service making concessions on timber sales and the other groups making concessions on non-use. The ability to sit down and seek accommodation, rather than digging in to an entrenched position and fighting it out on that line was of value to all groups. [21] The techniques involved seem to offer the opportunity for better relationships between commodity oriented and recreation groups, and to further a sense of community in the river valleys.

RESEARCH

Research showed some changes in emphasis from the late 1940s to the 1980s. During this time period (1948-1986) over 600 studies were published regarding research activities in the H.J. Andrews Experimental Forest (or simply the "Andrews"). As before, there was close cooperation between Federal and state research agencies, and particularly with Oregon State University. The first studies in the Andrews in the late 1940s through the 1950s tended to focus on logging and road system designs, as well as forest regeneration techniques.

By the 1960s, the research emphasis shifted to watershed studies with the examination of logging methods on water quality and yield. A series of studies in hydrology were carried on which involved stream-flow in unlogged as compared with logged areas and other studies of soil movement in logged areas, especially concerning water quality, water temperature, and oxygen levels. Generally speaking, the studies showed little adverse effect on the environment from patch logging, if carried out with care, though the variety of gradients, vegetation and topography was such that each watershed had to be judged as a unit. Southerly flowing streams, for example, would require more shade to preserve an equable summer temperature than those flowing to the north; for small streams, brush would suffice for summer shade, while larger streams would require more stream cover. [22]

During the 1970s, the focus again shifted to ecosystems, involving studies of nutrient cycling, energy flow, and the basic forest community. The Andrews was selected in 1969 as one of the intensive study sites of the Coniferous Forest Biome Project of the International Biological Program (IBP). During the field seasons of 1971 and 1972, 19 reference stands (plots) were established as part of the IBP studies. These reference points (12 in the Andrews, two in the nearby Wildcat Mountain RNA, four in adjacent drainages, and one located one mile west of Blue River) enabled researchers to focus on limited areas to investigate species diversity, density, biomass, leaf area index, structure, and forest succession. The reference plots, 50 X 50 meters each, served as "bench mark" areas for many of published studies involving the Andrews.

Research activities in the 1970s and 1980s grew rapidly as a result of increased support from the National Science Foundation (NSF) through the IBP and grants for individual projects. Further research into the basic ecosystem occurred in the 1980s because of a NSF-funded program of Long-Term Ecological Research Program, as well as research in applied forestry. The long-term—200 years—research is concerned with identifying the factors influencing the decay of logs in the forest and the role of decaying logs in the forest ecosystem. There has been a great deal of speculation on the role of down logs in providing nutrients, and this is the first systematic study. The down log study involves five hundred logs twenty feet in length, representing four west-side species—Douglas-fir, Pacific silver fir, western hemlock, and western red cedar—to be studied as they decay over a 200-year period. The study is managed by scientists from Oregon State University and the Forest Service's Pacific Northwest Research Station.

Further studies were made in regard to wildlife habitat. Earlier studies, as has been noted, dealt with relationships of cutting patterns (primarily clearcuts), to game such as elk and deer. The National Environmental Policy Act (NEPA) and the Endangered Species Act provided that all aspects of the environment be studied before timber sales or road construction, and that the Federal agencies provide "critical habitat." The Forest Service found itself faced, in particular, with questions as to what constituted "critical habitat" for such fowl and fauna as the Sitka deer in southeastern Alaska, the pine marten in Michigan, or the pileated woodpecker in the west. Research is an extended process, and the Forest Service often found itself faced with making policy decisions on matters in which experts disagreed. In the northwest, the question of the spotted owl became a major one.

The northern spotted owl *(Strix occidentalis caurina)* lives in the dense stands of mature timber, in the coniferous forests, and densely wooded canyons of the west. Old-growth timber is a

requirement for their habitat. Although some owls have been located outside of old-growth areas, studies show that over 95 percent nest in old growth trees, canyon wall cavities, or old hawk nests; they roost, in the summer, in the understory and live on the flying squirrels, hares, and wood rats that live in old-growth forest. They have special needs for an undisturbed habitat. Earlier studies indicated that each pair of owls needed a nesting area of at least one and a half miles in radius, or 1,000 acres or more of undisturbed habitat per pair of owls. Cutting roads through old-growth timber has been followed by disappearances of the spotted owl from the area.

In 1985, an appeal was filed by the National Wildlife Federation, the Oregon Wildlife Federation, the Lane County Audubon Society, and the Oregon Natural Resources Council with the Secretary of Agriculture that the Forest Service had been negligent in assuring the spotted owl sufficient habitat to survive. Meantime, the spotted owl question got attention from various pressure groups. "Preservationist" groups seized on the old-growth issue as a means of taking more land out of timber production and preserving it in a natural state urging 4,500 acres per pair of birds. Industry urged that the Service apply intensive management in wildlife habitat as lumbermen were applying it to timber management. As Dennis Hayward of the North West Timber Association said, "Rather than preserving 75 acres for a pair of pileated woodpeckers, or a thousand acres for a spotted owl, there's no emphasis at all in the Forest Service to see if maybe we can get by with half those acres through management of food supplies or specific habitat characteristics." Hayward's statement illustrated a major difficulty in this decision making. [23]

The Regional Office set up a task force to address the issue. In 1986, after involving a variety of in-house and university wildlife specialists, the Regional Forester decided in a DEIS published in 1986 that 400,000 acres should be set aside to protect 400 pairs of owls (1,000 acres per pair). Forest Service officials noted that this would mean taking out of production timber worth $25,000 per year for each pair of owls. The west-side Forests in Oregon and Washington contain an estimated 1,290 pairs of owls on 4.1 million acres of suitable owl habitat and another 1.5 million acres on the BLM and Park Service lands. The FEIS on spotted owls, released in July 1988, recommended 2,700 acres per pair in the Olympic NF surrounding the Olympic National Park to a low of 1,000 acres in the Klamath Mountain province (1,500 acres needed in the Oregon Cascades). Though not presently listed as a threatened or endangered species by the USDI Fish and Wildlife Service, the birds are regarded as an important "indicator" species to show relationship of old-growth to other species dependent on this type of ecological niche [in the spring of 1989, the USDI Fish and Wildlife recommended that the spotted owl be listed as a threatened species]. [24]

One effect of the new legislation of the 1970s was that the Forest Service became more diversified. The Forest Service had in the past relied on experts from the Research Station, on Oregon State University's wildlife staff, and on university consultants whenever special expertise was needed. With research on a continuing basis, they began to hire their own wildlife specialists, botanists, biologists, and fishery experts. A sizeable number of the new group were women. The diversification of the Service led to new employment opportunities for women, and increased enrollment of women in forestry schools. (See Appendix for the distribution of job series and women employees on the Willamette NF in the spring of 1988. Also in May of 1989,

the first two women district rangers were in place—Karen Barnette at Sweet Home and Lynn Burditt at Blue River).

During this time, the Forest Service became involved in other areas of research. Historical and archaeological research had not been considered in the past as one of the official missions of the Forest Service, although it had its place in public relations and visitor information service work. For many years studies of this kind were not the responsibility of the Forest Service, and preservation of historical records was a matter of personal judgement by the forest manager. [25]

Supervisors like C.C. Hall, P.A. Thompson, and W.F. Cummins made some attempt to preserve local historic records. Some scholarly studies by people like George Morgan and Lawrence Rakestraw dealt with aspects of the Willamette National Forest's history, while local historical societies collected and published material on the early history of the area. Martin Schmitt of the Special Collections, University of Oregon Library, gathered a mass of material dealing with early forest history of the region.

Some major changes came during the 1960s. The National Historic Preservation Act of 1966 declared it to be national policy that "the historical and cultural foundations of the nation should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people." A second act, the National Environmental Policy Act of 1969 (NEPA), mandated the use of interdisciplinary teams, which could include not only foresters, engineers, and wildlife specialists, but also fish biologists, landscape architects, economists, computer analysts, sociologists, and archaeologists. Some 197 amendments to the Reservoir Salvage Act of 1960 required outside review of cultural resource identification, evaluation, and protection. Cultural resource management (CRM) became the catch-all term for such work, and CRM joined the ever-growing list of acronyms and abbreviations.

The adjustment of various national forests and Regions to these new responsibilities was by no means uniform. It was marked by a somewhat unseemly squabble among professional organizations representing historians and archaeologists as to which should get priority in being hired. [26] Some forests and regions took on these new responsibilities easily; others were reluctant to trifle with these new-fangled directives. It was complicated, during the 1970s by directives from the fiscal office to clean out old records, and "clean-out-the-files-fanatics" destroyed a great deal of valuable material. The period was marked by conflicts and debates between the Regional Office and Supervisor's Offices with the Washington Office about priorities. However, we are concerned only with the Willamette National Forest. [27]

In history, Supervisor David R. Gibney took the important step of having his staff begin to collect historical material and for the forest to take steps to get the ranger districts to do likewise, and also to inaugurate an oral history program. To these efforts is due the fact that much of the historical record of the forest has been preserved. [28] During this same period, Martin Schmitt, curator of the Special Collections, University of Oregon, preserved much material of value for the region from the papers of foresters such as the Langille brothers (Will and Doug), Melvin L. Merritt, William B. Greeley, Fred E. Ames, and Thornton T. Munger. In the Oakridge area, a timber sale administrator, Wilbur Council, was deeply interested in archaeology. In his work on timber sales he made a number of finds, and collected oral history from friends among the Native

Americans. Though an amateur archaeologist, his expertise was such that he became involved in a survey by the University of Oregon's Department of Anthropology of the Western Cascades in 1969 and 1971. These surveys, financed by the National Science Foundation, discovered a number of potentially significant sites. [29]

During the first part of the 1970s there was little work done by the Forest Service in either history or archaeology. Gibney's successors as Supervisors, Smith and Alcock, were more interested in taking the pulse of the present than in reviewing the past. District personnel did collect data on site locations, largely encountered by field personnel, who found these remains while on other duty.

The decades between 1970 and 1988 saw major changes in CRM work. Beginning in 1970, there were a series of important CRM sites discovered and excavated, including the Baby Rock Shelter on the Oakridge Ranger District which had been disturbed by pot hunters. This was the first excavation of an inland rock shelter made in the Willamette National Forest. (Early research in rock shelters was began in 1964 at Cascadia Cave along the South Santiam River which had been extensively disturbed by relic hunters. The excavation, in which more than 400 artifacts were recovered, was carried out by Thomas Newman and reported in 1966.) In 1972, the University of Oregon, under contract with the Willamette National Forest, conducted archaeological investigations at the Indian Ridge site on the Blue River Ranger District. The U of O also conducted surveys of the McCredie Springs and Breitenbush Known Geothermal Resource Areas in 1975. These studies were under the direction of Sharilyn Reyna, then with the University, and later with the Willamette. The reports recommended that more surveys need to be conducted prior to road construction and timber sales, and that the Forest Service needed to conduct an education program to provide awareness of resource values and laws, especially in view of illegal collecting by citizens and Forest Service employees alike.

In 1976, Leslie E. Wildesen was hired as the first Regional archaeologist. She did much to shape Regional policy in regard to cultural resources, and by 1977 she had developed R-6 CRM guidelines for all 19 national forests. During 1977, she established a cultural resource technician program to train field personnel in conducting a cultural resource inventory. Oakridge was host to a training session for inventory of timber sales areas. In 1978, a University of Oregon graduate student was hired under the work-study program to work in the Oakridge area inventorying timber sales, evaluating sites, and collecting data gleaned from other Forest Service personnel. About this time, also, Sharilyn Reyna was hired by the Rigdon District. They were aided by Wilbur Council and by Terry Bertsch, a technician in fire control, who helped locate many sites and collected a great deal of local history. Paul Claeyssens began work in 1979 in the Oakridge area. Also in 1979, Tony Farque was hired as cultural resource technician in the Sweet Home Ranger District, becoming District archaeologist in 1980. [30]

Under Mike Kerrick, as Forest Supervisor, the CRM program gained momentum. The Willamette National Forest gained its own specialist in archaeology, Claudia Nissley, followed by William Zukosky, and Cari Davis, all of whom strengthened the forest program. They recognized that technicians could not do the needed inventory, and that specialists were needed to evaluate sites and maintain cultural resource programs in the various districts. Over the years, each district hired its own specialist. [31]

The CRM program in the 1980s has yielded a bewildering variety of important discoveries and reports, as well as resulting in two graduate students (Paul Baxter and Sandra Snyder) receiving their Ph.D.s as a result of archaeology work in Willamette NF sites. One of the important archaeology sites was the Blitz site about ten miles north of McKenzie Bridge. Fieldwork between 1981 and 1983 yielded 144 artifacts and 1,745 pieces of debitage at this hunting campsite. Horse Pasture Cave, located in the upper drainage of the Willamette River on the Rigdon Ranger District, was especially important. Excavations of this cave began in 1981 and an impressive list of recovered objects revealed it to be a summer base camp followed in later years by use as a hunting camp. The Vine Rockshelter, located above Coal Creek near the Willamette River, was excavated in 1983. This site yielded an extensive array of of stone and obsidian tools, indicating its use as a hunting camp, similar to the nearby Horsepasture Cave site. Finally, the Colt and Saddle sites were located near a ridge that separated two creeks in the upper Willamette River drainage. Excavations began in 1984 with the discovery that they were very important multi-component sites that probably served as summer base camps.

By the summer of 1987, 824 archaeological sites and 157 historical sites had been recorded on the Willamette (in 1977, only 44 archaeological and 40 historical sites had been identified). Of this total, various researchers had conducted 94 test probes or test pits (including nine data recovery excavations) of archaeological sites on the Willamette National Forest: Ten subsurface investigations on the Detroit Ranger District, 25 (with two excavations) on the Sweet Home, 25 (with two excavations) on the McKenzie, five on the Blue River, four on the Lowell, six in the Oakridge, and 19 (with five excavations) on the Rigdon. As recently as the early 1980s, many academic archaeologists thought that the Cascade Range would not yield any important or significant archaeological resources. The incredible range of prehistoric sites found on the Willamette, as well as adjacent national forests and BLM lands, has provided the academics and CRM managers a new outlook and ability to provide meaning to the valuable cultural artifacts and information about western Oregon's past. [32]

The first of a series of histories of the old land grant wagon roads was completed in 1981 under contract with Heritage Resource Associates and Lewis and Clark College historian Stephen Dow Beckham for the study of the historic Oregon Central Military Wagon Road. This was followed in 1983 by studies of the Santiam Wagon Road, done by the Anthropology and Public Planning Departments of the University of Oregon. [33] A large archaeological testing program was initiated on the Willamette beginning in 1983. Other studies included the historical archaeology around Quartzville; a series of studies of CCC activities were carried on in the Blue River District; while in the Rigdon and Oakridge areas both historic and prehistoric remains were inventoried and documented. The numerous "Bingham Trees" inscribed with Cy Bingham's initials, were identified; and a number of the trees initialized by John Breckenridge Waldo during his trips in the Cascades between 1880 and 1907 were located. [34]

In the administrative history, some major accomplishments were made. Ron Johnson of fire control compiled a remarkable historic record of the lookouts in the Willamette. This included records and pictures of most of the lookouts, panoramic views, pictures, and diaries and memoirs of the people who occupied the lookouts. This is a valuable historic record of a method of fire control that is now passing into history. Historians and archaeologists have worked together to determine which historic lookouts can best be preserved or restored. Gerald W. Williams,

sociologist and social historian attached to both the Umpqua and the Willamette National Forests, edited the diaries of John Breckenridge Waldo, collected historic photographs related to both national forests, conducted oral history interviews, compiled a series of lengthy bibliographies on the history of the Forest Service, and written numerous papers on a variety of administrative history topics. He also worked with Ron Johnson in cataloging historic material in the warehouse of the Eugene Supervisor's Office. In the Regional Office, Paul Hansen initiated an inventory of records stored at the Regional Office Warehouse, as well as a study of the Mt. Saint Helens disaster from the Forest Service perspective.

In addition to inventory, recording, and preservation, the Willamette National Forest moved in the direction of interpretation. At Fish Lake, the old ranger station, once the Santiam NF summer headquarters of Supervisor C.C. Hall, was restored. Oakridge RD developed a visitors' display that provides a sketch of local history from 10,000 years ago to the present, including a display of Indian artifacts donated by local citizens. Sweet Home RD has on display a section from one of the "Waldo" trees, and the information office in the Supervisor's Office has a number of cultural displays. Reconstructions of buildings done by the CCC were made near Lowell. The Forest Service carried on some major work in historic preservation on the Klovdahl tunnel and headgate, built between 1909 and 1914 on the west shore of Waldo Lake. This project, mentioned briefly in this history, but worth a book in itself, is of unique historical interest as a dream that failed for developing a power and reclamation system for the Willamette Valley. [35]

Yet the cultural resource data gained has not been without cost and—at least initially—controversy. Most of the opposition came from Forest Service managers who viewed the CRM program as an expensive program, with few if any benefits, and as limiting their options by preventing the development of certain lands which had identified CRM sites. The latter concern was also voiced by the contractors for timber sales and road construction. However, most of the opposition was overcome through an education program to Ranger District staff and the realization that every obsidian flake or rusty tin can found in an area was not "significant" and did not have to be preserved. One of the results of having a number of professional archaeologists was to institute a training program (REC-7) to give the cultural technicians and other field employees some minimal training on the recognition and importance of cultural objects. By the middle of the 1980s, District Rangers could see the positive benefits that could be achieved from the identification, excavation, and interpretation of cultural resources and began to emphasize the CRM program on the Districts.

RECREATION

The wilderness controversy continued during the 1970s, and increasingly became involved in the political arena. The Secretary's offer of granting the public 60 days (period ended January 17, 1970) to provide additional information about French Pete yielded over 10,000 letters, cards, and telegrams. Analysis of the public comments resulted in the French Pete management plan being modified to reduce the impacts from road and logging activities. Because of the new National Environmental Policy Act of 1969 (NEPA), the Chief decided that an environmental impact statement (EIS) was required. The draft EIS was circulated on November 6, 1970, for public comments. A final environmental impact statement was prepared to establish management direction for the French Pete area by July 14, 1971, and Secretary Clifford M. Hardin approved

the decision on October 14, 1971. The lower portion of French Pete was to be left in its present state. Access trails would be built into the Quaking Aspen Swamp, and dispersed recreation trails built into the upper reaches of the creek. Cutting would be mainly for salvage and improvement. The plan stressed public participation in decision making and flexibility, with recreation trails given a high priority. [36]

In implementing Hardin's directive, Smith modified existing management plans and announced his intention to take three years to make a comprehensive plan to follow the management direction outlined in the final EIS. Robert Tokarzyk and George Gudch worked out plans for both helicopter and road logging. Overall, the plan included timber harvest on the upper French Pete Drainage, with extreme care to be taken to avoid soil and stream erosion; and some priority given to building trails. The area south of French Pete Creek was reserved from future harvest. The vegetation canopy could not be opened, but might be modified by cutting. Balloon, multiple high-spar systems, and helicopter logging would be considered. [37]

Oregon's Senator Robert Packwood at first advanced the "Intermediate Recreation Area" plan of Richard Noyes, but eventually dropped this in favor of adding the French Pete-Ollalie Ridge area to the Three Sisters Wilderness. Senator Packwood, who had early drafted a bill modeled on Richard Noyes' plan, shifted first to a bill to include French Pete in the Three Sisters Wilderness, and then to enlarge the Three Sisters area.

However, in the early 1970s the focus shifted from French Pete to the entire problem of roadless (de facto wildernesses) areas. French Pete was listed in the Roadless Area Review and Evaluation (RARE) study that was undertaken by the Washington Office of all roadless areas remaining on the national forests. Initiated in 1971, a national review and evaluation of all existing areas without roads was scheduled for every national forest in the country. On February 29, 1972, the first of a series of public meeting was held to discuss those roadless areas identified on the Willamette National Forest. The roadless areas had to be 5,000 acres or larger that were undeveloped. In addition, those areas that would qualify for wilderness would have to meet the additional considerations of suitability, availability, and need. On the Willamette, the areas were as follows: Little North Santiam (Area 2-1) — 17,700 acres; Elkhorn (Area 2-2) — 4,700 acres; Middle Santiam (Area 2-3) — 12,000 acres; Echo Mountain (Area 2-4) — 6,000 acres; Smith Reservoir (Area 2-5) — 4,200 acres; McLennen Mountain (Area 2-6) — 7,400 acres; Walker Creek (Area 2-7) — 9,900 acres; Rebel Creek (Area 2-8) 8,600 acres; Maiden Peak (Area 2-9) — 58,100 acres; and Timpanogas (Area 2-10) — 7,900 acres. Of these ten roadless areas, three were within the French Pete area (McLennen Mountain, Walker Creek, and Rebel Creek). Initially, not one of the areas on the Willamette were proposed for wilderness study because they were felt to not meet the criteria for wilderness. Over 5,000 comments were received at the Washington Office concerning the Willamette's roadless areas.

On January 18, 1973, the Chief announced that nationally of the 56 million acres (1,448 roadless areas) under review, 235 of the areas were tentatively selected for possible wilderness status. Four areas on the Willamette would be studied for possible wilderness, which were all adjacent to existing wildernesses: Two additions to the Mt. Jefferson Wilderness, one addition to the Mt. Washington Wilderness, and one addition to the Three Sisters Wilderness. In the spring of 1973, two additional roadless areas (approximately 13,600 acres), both on the Sweet Home Ranger

District, were added to the Willamette's eleven inventoried roadless areas. These two new areas, along with the other roadless areas, were to be considered in the unit land allocation planning effort that was beginning on the Ranger Districts.

On October 15, 1973, Chief John McGuire announced that 274 roadless areas nationally would be studied for possible inclusion in the National Wilderness Preservation System. On the Willamette, there were four areas to be considered for wilderness—the same four as announced in the January draft. None of the French Pete roadless areas were included as an existing management plan had previously been decided for those areas. The final decision, however, was short lived, as it was appealed by various environmental groups and the EIS found to be inadequate. This set up a new review of roadless areas, to be called RARE II.

The RARE II reinventory began in the summer of 1977. Nationally, there were found to be 2,919 roadless areas, using new criteria, which was published on June 15, 1978. The final EIS was produced on the following January 4, 1979. More than 260,000 responses (58,606 from Oregon) were received on the national draft, which resulted in having 624 roadless areas being considered for wilderness classification. On the Willamette, eleven areas (200,066 acres) were studied: Bull-of-the-Woods (#6098), Mt. Washington (#6103), Mt. Jefferson Wilderness Study Area (#6101), Hardesty Mountain (#6105), Waldo (#6106), Charlton (#6107), Maiden Peak (#6108), Cowhorn (#6109), Bull Dog Rock (#6110), and Middle Santiam (#6929). Two of them (part of the Bull-of-the Woods and Mt. Washington roadless areas) made the final cut for wilderness study. (The French Pete-Ollalie Ridge controversy was finally resolved when it was added to the Three Sisters Wilderness in the Endangered Wilderness Act of 1978.) However, the RARE II decision, much like the RARE decision was appealed and taken into court. A decision by the Ninth Circuit Court in 1983 rendered the RARE II EIS as inadequate. After a brief attempt by Region 6 to undertake a new review of the roadless areas in the spring of 1984, the Congress made the decision on the disposition of the remaining roadless areas in Oregon and Washington during the summer of 1984. [38]

As part of the Oregon Wilderness Act of 1984, a series of large wilderness additions were made to the Willamette. These included the west side of Waldo Lake, formerly designated as a recreation area now called the Waldo Lake Wilderness; additions to the existing Mt. Jefferson, Mt. Washington, Three Sisters, and Diamond Peak Wildernesses, totalling 20,709 acres, and three new Wildernesses: Menagerie and Middle Santiam, in the Sweet Home District, and Bull of the Woods, most of which was in the Mt. Hood National Forest. This gave a total wilderness acreage in the Willamette of 380,853 acres, or about 23 percent of the total Forest area. The 1984 Act also included the Oregon Cascades Recreation Area (OCRA) of 157,000 acres on portions of the Willamette, Deschutes, Umpqua, and Winema National Forests. The OCRA acreage includes the Mt. Thielsen Wilderness on the Umpqua and Winema National Forests, as well as the 1984 additions to the Diamond Peak Wilderness. [39]

The decision on the wildernesses were not universally popular. Many people felt that the areas included too much land which was marginal, from the standpoint of wilderness values. As one ex-Regional Forester commented, "Ninety percent of the wilderness that exists in Oregon is not used by anybody. Regardless of timber values, there are a lot of areas that are now being considered for wilderness, but there is more area now designated as wilderness than will ever be

used. The Forest Service ought to have the opportunity to manage them for their recreation values so that recreation values are protected, and you can't do that on a wilderness area." [40] Preservationist groups were disappointed that certain areas they had desired for classification as wilderness were not included, and efforts were made to delay or halt timber harvest in existing roadless areas outside the wilderness. These took forms ranging from legal and constructive, including both work with the Forest Service to develop a consensus on management, to illegal and destructive methods, such as entering closed areas and sitting in trees, sabotage of machinery, blockading of roads, or driving spikes into trees. [41]

Plans for wilderness management were adopted for each of the wildernesses. In order to be compatible with the Wilderness Act, the plans had common characteristics. These included restricting travel to foot and animal travel; removing traces of previous occupation by humans; locating trails and campsites to avoid trampling the sensitive environment; protecting water purity on the streams and lakes; and recognizing that wildfire is a natural element in the wilderness. A major problem occurred with a large increase in the use of wildernesses. Use of the Three Sisters Wilderness, for example, rose from 64,000 in 1965 to 193,000 in 1971.

Wilderness management required some contradictions in complying with the terms of the Act. One was the presence of archaeological sites or historic structures in the wildernesses. No formal directives have as yet been developed for a compatibility of cultural resource values and wilderness values. However, structures such as shelters (which were already vandalized), water systems, and stone fireplaces were removed. Some protests were made over the destruction of cairns erected by the Mazamas in past years, since they were considered to be of historic value. The Forest Service is apparently leaning toward preservation of old Forest Service lookouts which are of historic value, and can be useful in fire protection. A policy of "benign neglect" was adopted toward some historic properties, which involves allowing these structures eventually to disappear. The debate continues over the nature and number of signs allowed in the wildernesses.

A second problem has been the vandalizing of archaeological sites. This has involved the shift from amateur collectors searching for arrowheads and other relics of the past to commercial collectors using shovels and bulldozers to collect from sites and selling their findings at a profit. To curb their activities, the Archaeological Resources Protection Act was passed in 1979. This made digging or surface collecting of artifacts on Federally controlled lands, without a permit, illegal. The major problems regarding violation of this Act have come on the Deschutes National Forest, but they remain a significant potential problem elsewhere. [42]

Within, and adjacent to, the wildernesses, there came to be special problems. These involved the need to fell trees for safety along the trails, without creating the appearance of use; preparing facilities on highways near the wildernesses which were jumping off places for trips, and which became high use highway areas; keeping animal and human overnight camps away from the water, and at the same time, avoiding damage to fragile areas; and building new trails to keep the old ones from becoming eroded and damaged through overuse.

The Bull of the Woods Wilderness created some new problems. This area, part of which was in the Willamette, but most of which was in the Mt. Hood National Forest, was most accessible from the west by the road up the Little North Fork of the Santiam. As has been noted, this road

through some mining claims had been the source of a great deal of strife between the Forest Service and the mine owners since 1930. The Hewitt interests had gone through several reorganizations, and now the chief group was the Shining Rock Mining Company, which had interest in 220 claims: Five of which were patented, seven were purchased from the government, and 208 to which final patent had not passed. The road across the claims was a private one, closed by a gate, but open to the Forest Service and to the mining company. The Willamette National Forest desired to have public access to the wilderness by the road, and to develop some trail heads to the region. The Shining Rock Company, at last report, was willing to allow logging and reforestation if they were paid for the wear and tear on the road; but they were reluctant to have the general public given access to the area. Legal action will probably be needed to settle the issue. [43]

The mining claims in the Three Sisters Wilderness were finally resolved after prolonged debate. In 1976 the U.S. Pumice Company applied for patent, largely to clear the way for a court settlement. The law's processes are slow, and the court did not reach a decision until 1981. They held in a 232-page decision, which will not be summarized here, that 790 acres represented invalid claims, and 670 valid. Final settlement came in 1983, when Congress appropriated two million dollars for purchase by the Service of the patented claims. [44]

The era of the 1980s, with its sharp cutbacks in appropriations, gave the Forest Service some new challenges. These cutbacks in funding were accompanied by phasing out or reductions of such programs as the Job Corps, Youth Conservation Corps (YCC), and the Young Adult Conservation Corps (YACC). With more work to do, there were fewer people to do it. The Forest Service met this need by various means. In cooperation with the University of Oregon, some work-study programs were directed toward assisting the Forest Service. The greatest response came, as it had in World War II, with a call for volunteers to take on jobs usually handled by seasonal, or, in some cases, permanent employees. The response was overwhelming. In the Detroit area, Linn-Benton Community College contributed 12-15 volunteers to aid district archaeologists. Volunteers worked mainly in the recreational areas as back country guards, campground hosts, resource aides, or on group projects. One group, the Obsidians, contributed 1,250 hours of work, maintaining or constructing 62 miles of trail. [45] In 1983, 405 volunteers contributed $250,000 worth of work in resource areas in the Willamette. While the volunteer program did much to meet the needs of the Service, it dealt a blow to schools of forestry in the Pacific Northwest, where traditionally undergraduate students had taken on seasonal jobs. The opportunities for seasonal employment diminished as that for unpaid work experience increased. [46]

Michael Kerrick noted that when he was a student of forestry 30 years ago, it had been the last of his thoughts to be concerned with enforcement of laws for the protection of life and property. Some lawbreaking has always occurred. But Kerrick commented, "There is more vandalism, there is more destruction of public property, and we are seeing more and more the thievery of our lockboxes at our campgrounds." [47] In 1985, it was estimated that four out of ten visitors used the campground facilities without paying the fee. Issuing citations to those who did not pay the fee within 30 minutes of occupying a campsite did result in a decrease of such evasion from 40 percent to seven percent. Cabins or guard stations in isolated areas were routinely broken into

and vandalized to the extent that they are now left unlocked, with stoves and other valuables removed in order to save broken doors, windows, and locks.

The Forest Service made attempts better to deal with violations. Kerrick had on his staff a special agent who had been through the FBI Academy. Each district had a pair of law enforcement people who had been through a special eight week training by the FBI. The major effort was to rely on local enforcement officials—that is, the county sheriff's office and the state police; and to focus on Federal regulations that the sheriff did not have authority to administer. [48]

There were major changes in types of camping. Campgrounds originally had been built to accommodate tents and automobiles. The later pattern of camping has been a growth of trailers and motor homes, as well as tents. This has meant the need to enlarge camping spots to accommodate the large vehicles, and to have in some campgrounds pumping stations for the toilets in these vehicles. In wilderness travel, freeze-dry food has largely replaced the canned or preserved food of the past. Wilderness travelers have tended to be as fashion conscious as James Bond, and the felt hat, flannel shirt, and Bergman boots of a past era became declasse in an era of Kelty packs, vibram soled boots, and goose down jackets. Restrictions were placed on camping practices in wildernesses. In the Sunshine Shelter area, for example, camping was forbidden within 100 feet of all streams and trails, and campfires were banned. [49]

Among the various recreational groups, hunting and fishing increased. The big game herds were well managed, and there was more hunting but less poaching. Fish were planted in the Lowell, Sweet Home, and McKenzie Ranger Districts. Fish habitat was improved, but new problems regarding road construction and timber management impacting fish habitat are being expressed by the sport fishing and environmental groups. In the Lowell District, the Forest Service, Oregon Department of Fish and Wildlife, Bonneville Power Administration, Rex Lumber Company, and Weyerhaeuser Lumber Company worked out an elaborate project to improve the habitat for anadromous fish. This consisted of habitat improvement developed by the Lowell Ranger District; a fish ladder funded by Bonneville Power Administration to provide passage over a 22-foot falls, a further ladder on Weyerhaeuser lands, and stocking the area with juvenile steelhead and spring chinook salmon. This was the first large anadromous fish habitat improvement project on the Willamette National Forest. [50]

The Forest Service worked with the Environmental Protection Agency (EPA) in their acid rain study in 1985. Since the Wilderness Act of 1964 prohibited motorized travel into the wildernesses, the Forest Service ground crews sampled water from 13 lakes in the wildernesses, while the EPA used a helicopter to test water from eight lakes outside the areas. [51]

Potential conflict over the rights of miners vs. recreationists developed in the Quartzville area. This was an old mining district, and a few miners still held on to their claims. However, panning for gold had become a popular recreational sport in the area; such recreational gold panning, in fact, would date back to CCC days. There was danger of conflict between recreationists and claim holders. In 1985, the Forest Service, in cooperation with the BLM, Linn County Parks Department, and Oregon State Department of Forestry, with other groups and agencies, began to develop an educational program. [52]

All forms of outdoor winter recreation developed, including snowmobiling, downhill skiing, and cross-country skiing. The Hoodoo Lodge burned, but was reconstructed, and the Hoodoo Corporation later obtained title to the Willamette Pass development. In 1983, the Willamette Pass Ski Corporation proposed to expand development in the area This involved building two lifts on the north slope of Eagle and West Peaks, one lift on the south side of West Peak, and construction of a lodge at the top of the runs. Public hearings on the issue found some groups opposed to the lifts on the north slopes, claiming they were more suited for cross-country skiing, and would destroy game habitat and the potential to be added to the new Waldo Lake Wilderness. However, most of the people favored the expansion, which amounted to about 1,100 acres. An environmental impact statement was completed, but work was postponed pending relocation of three miles of the Pacific Crest Trail, which would be affected by the enlarged area. [53]

McCredie Springs also came in for attention. The lodge and facilities had been wiped out by the flood of 1964. At about the same time, Lane County obtained ownership of the remaining buildings for non-payment of taxes. The buildings were burned and debris removed. From that time until 1982 the site remained undeveloped and open to public use.

Like Terwilliger Springs, McCredie became the center for lawless activities including stealing from cars, especially at night, violence, and rape. Squatters moved into the adjacent area. Nude bathing and drug abuse were common. Some armed felons made it a hangout for a time. There was need for more visibility of the law enforcement officers than by occasional patrols. In 1982 the Supervisor considered five alternatives for management:

1. No action.
2. Minimal management for safety and health.
3. Minimal management for safety and health with night closure.
4. A resort on the north side of Salt Creek.
5. A resort with use of both north and south sides of Salt Creek.
6. Closing the area.

A thorough examination of the area was made under the direction of Robert Barstad, Oakridge District Ranger. Public responses varied from leaving it in its present state to development of the area as a tourist attraction. Supervisor Kerrick favored Alternative 5, but with public use of the springs without registration at the lodge. At this writing, the resort has not been built. [54]

There was an effort by various environmental groups, beginning in 1987, to designate many of the Oregon rivers into the National Wild and Scenic Rivers System. Part of the reason to add Oregon rivers was that few were already in the system and that the wild and scenic river designation would preclude future hydroelectric developments on these streams. Bills were introduced into Congress by Senator Mark O. Hatfield and Representative Peter DeFazio. After several months of wrangling about which rivers or segments would be included, hearings were held in several places in the state. One of the hearings was in Eugene on July 1, 1988. The bills were strongly supported by the various Oregon environmental groups, mostly supported by the Oregon Congressional delegation, mostly opposed by the timber industry, and strongly opposed by several groups. One of the groups in strong opposition was the Alsea River Alliance, a loosely

organized assemblage from the Alsea River drainage which did not want their river, and thus their land, included in the bills. Another was the American Inholders Association, which has generally opposed all wild and scenic river bills.

After considerable Congressional discussion, interest group pressures, and the strong influence of Senator Hatfield, the wild and scenic rivers bill was passed by Congress and signed into law on October 28, 1988. The Omnibus Oregon Wild and Scenic Rivers Act of 1988 was the first state-wide wild and scenic rivers bill ever enacted by Congress. This act added 40 river segments to the National Wild and Scenic Rivers System. Included in this act were the McKenzie River (12.7 miles from Clear Lake to Scott Creek) and the North Fork of the Willamette River (42.5 miles from Waldo Lake to the forest boundary). In addition, two river segments were to be "study rivers": Blue River (from the headwaters to Blue River Reservoir) and the South Fork of the McKenzie River (from the headwaters to the upper end of Cougar Reservoir and from below Cougar Dam to the McKenzie River). Soon after the passage of this bill, the Oregon Scenic Waterway initiative (ballot measure #7), sponsored by the Oregon Rivers Council and other environmental groups, was passed by the voters of Oregon at the November general election. Four river segments on the Willamette were added as Oregon Scenic Waterways in this ballot: South Fork of the McKenzie River; upper McKenzie River; Little North Fork of the Santiam River; and North Fork of the Willamette River, including Waldo Lake.

TIMBER MANAGEMENT

From the 1950s through the 1970s there was a very high level of timber harvest (see Appendix). Willamette's timber sales outranked those of any national forest in the United States, and that of some regions. The combination of a good fundamental road system, an abundance of mature timber, and public demand for timber combined to make Eugene, in the eyes of some boosters, the "Timber Capital of the World." There were other features of the Willamette that were noteworthy. One was that there were a large number of lumber companies in the area. Consequently, a given sale might have 40 bidders, rather than two or three as was the case in many forests in the Southwest. The result was that the winning bid on a sale would usually have to be far over the appraised price—sometimes as much as 50 to 100 percent. With shifts in economic policy and in the business cycle, this bidding got some people into trouble. Because of the continuing high inflation, bidders could make a profit by holding their purchased timber sales until the end of the contract period, usually three to five years. This enabled the timber companies to play a "timbers future" bidding and marketing strategy. With the Reagan administration, a slower rate of inflation, falling off in the home construction and building trade, all-time highs in higher mortgage and lending rates, and Canadian competition caused many companies to find themselves in difficulty. In 1979, the forest had outstanding sales of 3.4 billion board feet, about 2.1 to 2.3 billion of which were purchased at such rates that the operator could not made a profit.

In the early 1980s, a number of sawmills closed permanently, especially those that were marginal or money losing operations. Some sawmills reopened when better economic conditions prevailed or when union concessions were gained. Often the reopened mills had fewer employees who took substantial reductions in wages and benefits so that they could continue working in their chosen professions. The Pope and Talbot operation in Oakridge is representative of the latter

group and is now operating with greater efficiency and higher worker productivity than before [in May of 1989, the mill was sold]. [55]

There were changes in logging technology. Truck logging remained the usual type of logging; however, the old spar trees, topped by daring climbers, were replaced by steel towers. In the 1950s, dragging logs on the ground was thought to be silviculturally desirable because it exposed mineral soil. By the 1980s the aim was to preserve the original forest duff as much as possible. Helicopter logging was common in steep terrain and roadless areas, particularly for salvage sales. Clearcuts were limited to 60 acres, but averaged about 25 acres. Each district had available professional engineers, biologists, soil and water experts, and archaeologists to examine sales areas; and to evaluate large sales, there was provision for public input. The major forest road system (consisting of arterials and collector roads) had, by 1970, already been constructed; the new road building has been for spur (local) roads.

From about 1910 to 1950 the aim of the Forest Service and the lumber industry had been, in E.T. Allen's phrase, "New Forests for Old"—that is, eliminating the old-growth forest to make room for new-growth. There came, with the 1970s, a concern for preservation of old-growth forests as habitat for spotted owls and other birds and beasts, for recreation, and for ecological reasons. The question "How much old-growth shall we save?" became a major one in the Region. It led the Forest Service to exercise some caution in making sales in old-growth stands. Pressure on the issue came from various sources ranging from the Oregon Natural Resources Council, making formal demands that old-growth timber cutting cease, to Earth First!'s direct action, sitting in trees destined for harvest, or driving spikes into trees. Representatives of the timber industry argued the need for more research on how much old-growth was needed before trying to save it. As one industry official put it:

> How much old growth do we really need? I don't think anybody knows that. I think the perception of some people is that old growth is inviolable, that it represents something almost beyond this world—that it has a spiritual value. As long as you have people that believe that, you will never have enough old growth for them. I think that from a practical viewpoint, you have to take a look at how much old growth is necessary to preserve certain types of eco-systems, how much is necessary to remain for certain kinds of recreation. I happen to believe that we have an awful lot of old growth and I think we're going to have an awful lot of old growth for all time. I don't think it's going to go away, and the perception that people like the environmental community promote is that we're about to cut the last old growth stand, and that's not true at any point and it's not true now...I think there is a misconception of what the root cause of all of this is, and it has nothing to do with old growth, it has nothing to do with spotted owls; it really has nothing to do with any one of these elements. It has to do with the belief that anything man does is wrong if it affects the environment. As long as you have people that believe that, they will use whatever device be it spotted owl, snail darters, old growth, or whatever to achieve the end—shortcutting, delaying or abandoning development of any kind. You have to recognize that there will always be these people, but you also have to go ahead regardless of those people because they do not represent the true interests of the environment.

Representatives were critical of the basis on which the Forest Service accepted untested research by wildlife biologists. As another industrial official said:

> It seems to me it's a young science that we're learning a heck of a lot about, but the way the Forest Service is taking it is that it's God-given; that the spotted owl must have a thousand acres or that if it goes to the edge of the old growth it's going to see a clearcut, fall over and die. Well the natural system doesn't work like that; animals adapt, and there's various degrees of adaptation. [56]

Further problems with forest management came about in regard to the use of pesticides. The Federal Pest Control Act of 1947 had declared it the policy of the government to protect all forest lands, regardless of ownership, from destructive forest insect pests and diseases, and authorized the Secretary of Agriculture to work out cooperative agreements with other forest land owners to carry on control measures. In 1962, Rachel Carson published her book, *The Silent Spring*, an indictment of insecticides. The book led to modifications of existing practices relating to the approval of all pesticides. Generally speaking, and to describe in simple terms what was actually a complex process, the Environmental Protection Agency was given authority to classify, recommend, and ban as hazardous, pesticides deemed dangerous. [57]

The issue arose in 1973 over an outbreak of tussock moth in Idaho, Washington, and Oregon. At that time, the only known insecticide for tussock moth control or eradication was DDT. However, Rachel Carson's strong indictment of DDT made the Forest Service aware that its use would arouse all sorts of political recriminations. Regional Forester Schlapfer worked with state officials and the BLM in preparing environmental impact statements. DDT had been outlawed by the Council of Environmental Quality, but had left one loophole: That if there was a true emergency of national significance, the DDT could be used. The area at stake was about 1,200,000 acres. The Forest Service, Indian Service, BLM, Dean of the OSU School of Forestry, head of research and State Forester's office pushed for emergency use. Their petition was denied on political grounds. In 1974, it was accepted after about 800,000 acres were defoliated. The net results of this were mixed. Those who opposed use of insecticides asserted that the problem would have solved itself anyway. Researchers began to look for a biological means of control of insect infestations. The problem encouraged a great deal of research on the effects of DDT.

In 1979, one gypsy moth was detected in Oregon at Lake Owsego. Over the next five years, small outbreaks of the defoliating insect were found and successfully treated in Gresham, Salem, and Corvallis. However, in the summer of 1984, the largest single outbreak of gypsy moths ever found west of the Mississippi River was discovered near Pleasant Hill at the edge of the Willamette National Forest. Attracted by specially scented traps, swarms of male moths clogged the traps. The moths were found on over 200,000 acres of land in Lane and Douglas Counties. If the moths were left uncontrolled, loss of timber would have been enormous. A 16-member task force wrangled for weeks trying to come to a resolution on which chemical agent to apply. The timber industry and state officials insisted on using aerial spraying with chemical insecticides, while environmental groups, led by Lane County Commissioner Jerry Rust, were opposed. Rust, and others, recommended trying a little-known biological compound called Bacillus thuringiensis (or B.t. as it was commonly called). The issue went to court, but before a judge could rule, the state elected to aerial spray with B.t., if enough supplies were available. Some 140

people were assigned to the project, including Forest Service, BLM, USDA Animal and Plant Inspection Service, Oregon Departments of Agriculture and Forestry. Helicopters were stationed at various places in the county, but the main compound was at the old Kimball mill property east of Pleasant Hill. In the spring of 1985, 227,000 acres were sprayed in Lane County, including portions of the Lowell Ranger District and the BLM Eugene District, with 190,000 acres sprayed in 1986, and just a fraction of these acres in 1987. During the summer of 1988, only a handfull of moths were detected in the sprayed areas. This was the largest eradication program using B.t. ever attempted in the U.S. and the outcome was even better than expected, which surprised even the environmental groups. Monitoring of new traps continues. [58]

During the summer of 1987, when gypsy moth spraying was slowing down, an outbreak of western spruce budworm was discovered on the Willamette. The moth larvae eat the new growth of needles and buds on the evergreen trees, eventually slowing tree growth or killing the infected fir or spruce tree. Although the spruce budworm can be found almost anytime on the forest, an estimated 89,570 acres of the Mt. Jefferson Wilderness and adjacent areas were found damaged. The budworm was also found in epidemic infestations on over 900,000 acres of the nearby Mt. Hood and Deschutes National Forests. The Regional Office is coordinating an effort to control the insect populations with B.t. [59]

Under Regional Forester Richard E. Worthington's administration, issues arose regarding herbicides, especially the chemical 2,4,5-T. The Forest Service had been spraying without an environmental statement, on the basis that the herbicide did not have a major environmental impact, since it was used to spray rice fields twice a year. A judge ruled against the Forest Service. The Forest Service completed an environmental statement; spraying began in the Siuslaw National Forest, and this brought about a major confrontation between opponents to spraying and the Regional Forester. However, the Assistant Secretary of Agriculture, because of pressure from the anti-herbicide people, stopped the Forest Service from using it. Worthington's views, that the herbicide was not dangerous, remained.

There were at least four groups opposed to herbicides. One group believed that all herbicides were dangerous, and that the indiscriminate application of the dioxon-based herbicides was causing fish, animal, and even human harm and death. Another group felt that insect infestations and diseases should run their own courses or be treated by natural means. This view was shown by some who opposed cutting insect infested and diseased trees from the French Pete area or any wilderness. A third group were, in Worthington's words, "opposed to anything that would increase the ability of the Forest Service to cut timber; they want to stop cutting timber." Another group were the marijuana growers, afraid of the effects of herbicides on their marijuana patches. Worthington believed that much of the money for anti-spraying campaigns came from this group. [60]

Free use of resources in the Willamette National Forest increased during the 1970s and 1980s, especially in the harvest of Christmas trees and collection of firewood. Logged over lands and power line rights of way were areas in which young growth flourished, and by the 1970s the time was ripe for Christmas tree harvest. The thinning of the stands was also valuable from a silvicultural point of view. The growing popularity of wood stoves, combined with widespread unemployment in the 1980s led to collection of free firewood from logged areas. As in

recreation, there was an increase in lawlessness. Firewood was free, but some people attempted to collect the wood and sell it commercially. Some Christmas trees were cut for commercial purposes without permits. In 1982, a new and higher schedule of fines for such infractions was issued by a Federal District Judge in Portland, but the depredations continued. [61]

More serious was sabotage, or in the words of its proponents, "ecotage" or "monkeywrenching." The Sierra Club and other groups had, during the 1960s, dealt with this type of protest in an academic manner or by simply ignoring it. In the 1980s these academic ideas were carried out in action by new fringe groups, especially Earth First! "Ecotage" was the term its proponents used to define sabotage for ecological purposes. It was based on the assumption that just about any action humans takes in regard to the earth is ecologically damaging, that existing land management planning procedures are not working, and that there is need for direct action.

In 1984-1985 a series of actions took place in the Willamette National Forest. There were some peaceful demonstrations in front of the Supervisor's Office in Eugene, where a tepee was erected, pamphlets handed out, and songs sung. But the demonstrations took on an uglier tone. In the Hardesty Mountain area, trees had spikes driven into them by a group identifying themselves as the Hardesty Mountain Avengers. Similar action by the Bella Abzug Garden Club took place at Pyramid Creek. The Abzug Club, along with the Cathedral Forest Action Group also blockaded roads in the Pyramid Creek area. In the Squaw Creek area, activist groups built platforms in trees. The places selected for action were areas which Congress had considered for wilderness status, but were not included in the 1984 Oregon Wilderness Act. Supervisor Kerrick wrote, "Instead of ending the debate over wilderness, things have heated up considerably since Earth First! chose the Willamette National Forest as a battleground to fight for its cause."

The Willamette National Forest met the threat with three approaches. First, it invited the "ecotage" groups to work with the forest managers in seeking a consensus on land management. At this writing, the approach seems not to have much success. Statements and position papers issued by the "ecotage" groups seem to show an unwillingness to take this route. Second, the Willamette National Forest plans to close, to public entry, the entire area in which ecotage or demonstrations are threatened. Third, the Forest will take all steps necessary to bring violators to justice, and take both criminal and civil action against them. Several such actions have been taken, or are pending at this writing. [62]

EPILOGUE: THE TASKS AHEAD

The Willamette National Forest, at this writing, is as always in the process of change. In administration, a shift or transfer of BLM land (mostly the O&C lands) in western Oregon to Forest Service management was proposed in 1986. This would have involved some redrawing of present national forest boundaries and shift in philosophy toward land management in many western Oregon areas. However, actions in Congress and an outcry from affected communities have put this proposal on the back burner of Congress. It is doubtful that it will ever "see the light of day" with the present make-up of Congress. Relief legislation for the timber industry, ranging from tariffs on Canadian imports to sale contract renegotiation, is before Congress. However, the timber contract relief act in 1984 and the trade treaty with Canada in 1988 make these efforts moot at the present time. Problems on a series of questions ranging from timber

harvest reductions in the draft NFMA plans, spotted owl management, old-growth (now referred to as ancient forest) preservation or utilization, wild and scenic river designation, big game habitat, and cutting practices continue.

In interviews, both the ex-Regional Forester and the present Forest Supervisor have tried to evaluate the state of the Forest and Region at the present, and to foresee the shape of the future. Sirmon felt that the Forest Service had not done as well as it might have done on litigation dealing with environmental issues. The Forest Service will have to adjust to new economic forces and a perceived scarcity, rather than an abundance of certain resources. One may expect more "regimentation" on the Ranger District level than there has been in the past, and less room for individuality. Allocation of resources is a key problem. He considered the consensus building efforts to have been successful. However, since Sirmon left the Region, it is clear that at least for the major contending groups, consensus is farther away than it was in the mid-1980s.

Such is the perception from the Region. From the Forest, Supervisor Mike Kerrick stressed the success of trying to reach all segments of the public, and of some efforts toward building consensus. He spoke on the urgent need for continued research on wildlife habitat, especially the spotted owl, and its relationship to timber harvest, and predicted that this would be the focus of research during the next 15 years. Lawlessness remains a major problem in the Forest. But the views of both Regional Forester and Supervisor were optimistic insofar as the continuing ability of the Forest Service to solve these problems is concerned.

"The seventies saw the maturation of environmental concern, and the challenge of trying to balance all the needs, wants, and resources." Kerrick said, "I think we have made some advances in learning how to work with people, learning to work with our publics. We aren't there yet. I don't know that we ever will be in a position to satisfy all of the various wants and desires of the American public as expressed through our local public, but that is something we are continually trying to develop."

BIBLIOGRAPHIC NOTE

This history is written for an audience of foresters who are familiar with terms in common use in their profession. For readers who are not familiar with the technical or colloquial terms used herein, the following reference books should be consulted:

Society of American Foresters, *Terminology of Forest Science, Technology. Practice and Products* (Washington, 1983, Second Printing). This is a standard reference book for terminology.

Richard C. Davis (ed.) *Encyclopedia of American Forest and Conservation History.* Two volumes. (New York, Macmillan, 1983). This contains a series of brief articles on significant topics.

Walter F. McCulloch, *Woods Words* (Portland, OR, Oregon Historical Society, 1958). Good source for both technical and colloquial usage.

The following references are useful for bibliographies of forest history books and articles:

> Richard C. Davis (ed.) *North American Forest History: A Guide to Manuscripts and Archives in the United States and Canada* (Santa Barbara, California Forest History Society, 1977). This lists archival holdings.
>
> Ronald J. Fahl (ed.), *North American Forest and Preservation History: A Bibliography* (Santa Barbara, California Forest History Society, 1977). Standard bibliography for articles on forest history.
>
> E.N. Munns, *A Selected Bibliography of North American Forestry,* 2 Volumes (Washington, G.P.O. 1940). Definitive bibliography of technical articles up to 1940.
>
> Gerald Ogden (ed.) *The United States Forest Service: A Historical Bibliography, 1876-1972* (Davis, California Agricultural History Society, 1976). Very valuable source for periodical material.

In addition to these, Gerald W. Williams has written a number of guides to sources and bibliographies for general and specific topics about the Forest Service as a whole, Pacific Northwest Region, other Regions, the national forests, and forest work programs for youths. Universities like the University of Oregon and the University of Washington have published specialized guides for their holdings.

Magazine articles, used relating particularly to forest history, include the *Journal of Forest History* (the journal of the Forest History Society), *American Forests* (the journal of the American Forestry Association, published under various titles), and the *Journal of Forestry.* Regional historical journals have included the *Oregon Historical Quarterly* and the *Pacific Northwest Quarterly.* Journals read relating particularly to recreational groups have been the *Mazama* and the *Sierra Club Bulletin.*

UNPUBLISHED SOURCES

The Willamette National Forest is fortunate in having preserved a great number of historical documents dealing with its history. These files are kept in the Forest Supervisor's Office, especially the information office, and in the Willamette National Forest warehouse in Eugene. They are particularly rich for the period from early times to 1971.

The Regional Office warehouse in Portland also has a large store of documents, some of which relate to the Willamette National Forest. A partial inventory of the contents of the cartons, some of which were returned from the Federal Records Center in Seattle, is available in the Regional Office, office of information. Unfortunately, a new lighting system was put in the storage place and the cartons are in a state of disarray, so they were not consulted to the extent they should have been.

The Special Collections Division, University of Oregon, has several sets of records of value for this historical work, especially those of Cy Bingham, Smith Bartrum, and other early foresters. The Oregon Collection also has a fair selection of Forest Service publications.

NOTES—CHAPTER VI

1 Lawrence Rakestraw, "Urban Influences on Forest Conservation," *Pacific Northwest Quarterly*, 46:4 (October 1955), 108-113 gave an account of the early period. David R. Gibney has given valuable information on the New Deal period; see also Chapter IV of this history.

2 Samuel Trask Dana and Everet W. Johnson, *Forestry Education in the United States Today and Tomorrow* (New York, 1963), 11.

3 Interviews with Gale Burwell andDavid R. Gibney; Connaughton, "Reminiscences"; Richard Wilen, *McKenzie River Societal Analysis: A Pilot Application of a Social Inventory Methodology* (Eugene, 1978); Linda J. Peterson, *Socio-Economic Overview of the Willamette National Forests Area of Influence* (Eugene, WNF, 1983).

4 Roderick Nash, "Rounding Out the American Revolution: Ethical Extension and the New Environmentalism," in Michael Tobias (ed.) *Deep Ecology* (San Diego, 1984), 176-181. *Environmental Review*, 9:4 (1985) and 10:1 (1986) give a check list of such courses.

5 Thomas R. Cox, Robert S. Maxwell, Phillip Drennon Thomas and Joseph J. Malone, *This Well-Wooded Land* (Lincoln, Nebraska, 1985), 260; Forest Service *Daily News Digest,* January 30, 1985; Article "O&C Timberland Swap Off, Hodel Says" Eugene *Register-Guard,* August 18, 1985.

6 Keith A. Argow, "Forestry Education," in Richard C. Davis (ed.) *Encyclopedia of AmericanForestry* (New York, 1983, Vol. I), 234-9.

7 This abbreviates and oversimplifies a series of complex matters. They involve pressure by professional organizations, such as the American Historical Association and the Western Historical Society to get the Forest Service to hire more historians; struggles for turf among anthropologists, archaeologists, and historians on "Who's in charge here?" in CRM work; curriculum changes in schools of forestry to broaden curricula; efforts by environmental activists to be hired by the Forest Service in order to change it from within; dual degree programs involving forestry and engineering, biology and social science; and in-service training programs by state and Federal natural resource departments. This writer has been involved, over the past twenty years, in a number of these programs, both in teaching and research. He is indebted to Stephen Karpiak, Erick Bourdo, David Gibney, David Burwell, and D. Robert Hakala for discussions and evaluations.

8 Biographical material was supplied by information office, Regional Office. Of particular value were two oral interviews by Linda Dodds of former Regional Foresters Ted Schlapfer, interviewed February 1, 1984, and Richard Endicott Worthington, interviewed April 18, 1984.

9 Willamette National Forest Bulletin 215, December 4, 1970; John Alcock to Elmo Richardson, May 23, 1982, WNF/H.

10 Michael A. Kerrick, taped interview with Lawrence Rakestraw, December 3, 1984.

11 John E. Alcock to Elmo Richardson, May 25, 1983, WNF/H; interview with David R. Gibney and Gale Burwell.

12 See Nancy Shute, "Sell It: Jon Beden's Radical Plan to Save the Land," Magazine Section, *Sunday Oregonian*, February 10, 1985, 4-8, for the privatization viewpoint.

13 Nash, "Rounding Out the American Revolution."

14 Holway Jones, review of *Wilderness and the American Mind, Sierra Club Bulletin,* 68:4 (July-August, 1983), 73-7; interview of Andy Kerr by Jerry Mason, May 10, 1984, Information Office, Willamette National Forest; interview of Dennis Hayward by Jerry Mason, July 31, 1984, Information Office, Willamette National Forest.

15 Interviews with Gale Burwell and Jerry Mason; Conservation Education and Environmental Education Files, Information Office, Willamette National Forest, Eugene, OR.

16 Ann. Rep., WNF, 1971, 3-15; Wilen, *McKenzie River Societal Analysis: A Pilot Application of a Social Inventory Methodology* (Eugene, WNF, 1978); Linda J. Peterson, *Socio-Economic Overview of Willamette National Forests Zone of Influence* (Eugene, WNF, 1983).

17 *Final Environmental Statement, Multiple Use Land Management, Timber Management, Narrative and Appendix* (Portland, USDA Forest Service, 1977).

18 Jerry Mason, *Hearing the People; Interview with Key People,* (Mimeo., Eugene, WNF, Information Office, 1987); Kerrick Interview.

19 Patti A. Rodgers, *Content Analysis Report: Public Responses Received on the Draft Environmental Impact Statement and Proposed Forest Plan, Willamette National Forest,* (Mimeo., Eugene, WNF, October 23, 1988).

20 Terwilliger Springs File, WNF/H.

21 Jerry Mason, *Seeking Consensus on the Willamette,* (Mimeo., Eugene, WNF, Information Office, 1984).

22 Jack Rothacher, *Does Harvest in West Slope Douglas-fir Increase Peak Flow in Small Mountain Streams?* PNW Forest and Range Experiment Station Research Paper PNW 163 (Portland, 1973); Jack Rothacher, C.T. Dryness, and R.L. Fredricksen, *Hydrologic and Related Characteristics of Three Small Watersheds in the Oregon Cascades* (USDA Forest Service Pacific Northwest Forest and Range Experiment Station, Portland, 1967); George W. Brown, *The Impact of Timber Harvest on Soil and Water Resources,* Ext. Bull. 827 (Corvallis,

Oregon State University Extension Service, February, 1973); and Forest Service Research News, Willamette Briefing Reports, October, 1985.

23 Jay Heinrichs, "The Owl and Old Growth," *American Forests*, 90:3 (March, 1984), 22-3, 54-6 contained the best non-technical account of the problem. *Habitat Management for the Spotted Owl: Planning Report* (Portland, USDA Forest Service Pacific Northwest Region, October, 1985) summarized some of the issues and concerns in dealing with this bird. Quotation of Hayward's was from Jerry Mason's oral interview with Dennis Hayward. On terms of the Endangered Species Act and how it affected wildlife managers, see Fairfax and Dana, *Forest and Range Policy*, 263-4.

24 Region 6 spotted owl EIS team published, in July 1986, a *Draft Supplement to the Environmental Impact Statement for an Amendment to the Pacific Northwest Regional Guide,* Two volumes (Portland, USDA Forest Service, Pacific Northwest Region, 1986), to address Regional guidelines for managing the spotted owl; there were over 40,000 comments received on the DEIS, with both the timber industry and environmentalists agreeing only that not enough research had been completed on the owl; USDA Forest Service, Pacific Northwest Region, *Final Supplement to the Environmental Impact Statement for an Amendment to the Pacific Northwest Regional Guide - Spotted Owl Guidelines,* Two volumes (Portland, USDA Forest Service, Pacific Northwest Region, 1988).

25 Directives from the National Archives as to disposal and preservation of records were not always followed in Regional and national forest offices. Archival managers themselves did not always use good judgement; there has been, for example, a persistent ignoring of the value of ranger diaries.

26 Publications of the Western History Association and the James Wright Society are instructive in tracing these squabbles. It was, however, largely limited to the administrative offices rather than to the field. For this writer's evaluation of the relative parts to be played by historian and archaeologist, see Lawrence Rakestraw, "Historical Interpretation," in Grant Sharpe (ed.) *Interpreting Our Environment* (New York, 1982), 560-585.

27 This writer has seen such destruction in offices of the Tongass and Gifford Pinchot National Forests. The Willamette escaped this blight. This writer was also embroiled in questions of relative jurisdiction between the Washington and the Regional Offices.

28 Interviews with David R. Gibney and Gale Burwell.

29 Paul Claeyssens, "Oakridge Ranger District CRM Program 1965-85." Manuscript in this writer's possession, January 30, 1985; Rick Minor and Audrey Frances Pecor, *Cultural Overview of the Willamette National Forest, Western Oregon* (University of Oregon Anthropological Paper No. 12, November 12, 1977).

30 Claeyssens, "Oakridge"; Minor and Pecor, *Cultural Overview of the Willamette National Forest, Western Oregon* (1977); Sharilyn Reyna, *Archaeological Survey of the Breitenbush Geothermal Area, Marion and Linn Counties, Oregon* (Eugene, OR: University of Oregon,

Department of Anthropology, 1975) and *Archaeological Survey of the McCredie Geothermal Area, Lane County, Oregon* (Eugene, OR: University of Oregon, Department of Anthropology, 1975). Claeyssens lists the major anthropological papers published.

31 Claeyssens, "Oakridge"; Stephen Dow Beckham, *Oregon Central Wagon Road: A History and Reconnaissance* (Portland: Heritage Research Associates #6, Vol. 1, 1981); James Hold to Lawrence Rakestraw, January 23, 1986.

32 Cultural Resource Management reports (Eugene, WNF, Recreation).

33 John K. Stutesman, *Santiam Wagon Road Evaluation, Pt. 1: Environmental Setting, History and Evolution* (November, 1983); Cynthia Guminski, Robert Brodsky, and Michael Gilmore, *The Santiam Wagon Road, a Historic Preservation Study* (Eugene: University of Oregon Department of Planning, Public Policy and Management, 1983).

34 In addition to sources previously cited, visits to ranger stations at Sweet Home, Detroit, and Blue River were revealing as to the field work done by the staff. I am particularly indebted to Gale Burwell, Tony Farque, Ron Johnson, and Gerald Williams for guiding me to this material. Amateur historian Robert Cox of Eugene has been especially helpful to the Willamette NF in tracking down and recording the scribings found on the Cy Bingham and Judge Waldo trees.

35 Gerald W. Williams, "Forest Entry Historical Records Inventory for the Willamette National Forest" (Mimeo., July 20, 1986), WNF/H; Ron Johnson, "Inventory of Historical Records" (Mimeo., 1986), WNF/H; Gerald W. Williams, "The Fur Trade Era: Expeditions, Explorations, and Journeys Into and Through the Regions of Western Oregon, 1805-1869" (Mimeo., July 11, 1986), WNF/H; and Paul G. Claeyssens, *Private Enterprise and Early Twentieth Century Development on Oregon's Second Largest Lake: A Cultural Resource Evaluation Report of the Klovdahl Tunnel and Headgate Structure, Waldo Lake, Willamette National Forest, Oregon* (Eugene, WNF, 1987). Field examination of sites, 1984-5.

36 French Pete File, WNF/H.

37 French Pete File, WNF/H.

38 RARE and RARE II Files, WNF/H.

39 *Forest Service News, WNF*, June 28, 1984.

40 Worthington Interview.

41 On illegal methods to prevent timber harvest, see Michael A. Kerrick, Forest Supervisor, *Ecotage from Our Perspective: An Explanation of the Willamette National Forests' Policy on Environmental Policy Known as Ecotage* (Eugene, WNF, 1985).

42 Claeyssens, "Oakridge"; Christopher Boehme, "Who Won the Past: Archaeologists vs. Collectors," *Sunday Oregonian, Northwest Section,* February 23, 1986, 6-7, 22, The individual

reports on wilderness management plans in the Supervisor's Office (at Eugene) of the Willamette National Forest offer a great deal of detail on individual management plans for each wilderness.

43 Kerrick Interview; Detroit file, WNF/H; Mill City *Enterprise,* July 12, 1984.

44 Rock Mesa File, WNF/H.

45 *WNF News Release,* April 28, 1984.

46 This problem has been a subject of frequent discussion with students.

47 Kerrick Interview.

48 *Forest Service News, WNF,* May 17, June 27, 1985.

49 The James Bond Syndrome in wilderness travel began to develop as early as 1945, based on this writer's observation. I have seen this also in the Great Lakes area, particularly in the Pictured Rocks.

50 *Forest Service News, WNF,* October 10, 1985.

51 *Forest Service News, WNF,* October 8, 1985.

52 *Forest Service News, WNF,* May 11, 1984.

53 *Forest Service News, WNF,* April 29, November 1, 1985. *Willamette Pass Alpine Winter Sports Site: Final Environmental Impact Statement, Summary.* (Willamette National Forest, April 29, 1985).

54 *McCredie Hot Springs Environmental Assessment, 1982,* WNF/H.

55 Kerrick Interview.

56 "Timber Management Perspective on Forest Service Land Management Planning Process: An Interview with Mike Sullivan and Rick Bailey, March 13, 1985," in Jerry Mason, *Hearing the People.*

57 Fairfax and Dana, *Forest and Range Policy,* 255-257.

58 Ted Schlapfer, Interview by Linda Dodds, February 1, 1984 (USDA Forest Service Pacific Northwest Region, Portland, 1984); "Mothbusters' Find Work-and Friends" *Springfield News,* May 15, 1985.

59 *Forest Service News, WNF,* July 29, 1987; "Foresters Assess Spruce Budworm Damage" *Register-Guard,* August 15, 1987.

60 Richard Endicott Worthington, Interview by Linda Dodds, April 18, 1984, (USDA Forest Service Pacific Northwest Region, Portland, 1984).

61 *WNF News Release,* July 26, 1982.

62 John G. Mitchell and Constance Stellings, *Ecotactics,* 56, 150. Kerrick, *Ecotage.*

CHRONOLOGICAL SUMMARY, 1970-1988

1970

The National Environmental Policy Act of 1969 (NEPA) signed on New Year's Day, heralding the commencement of the "environmental decade." NEPA required every Federal agency to prepare and circulate an environmental impact statement (EIS) "on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment." The act also created the Federal Council of Environmental Quality (CEQ) in the Executive Office of the President to advise the President on matters of environmental quality and to review agency compliance with the act.

The first Earth Day celebrated April 22.

Arnold W. Bolle, from the University of Montana School of Forestry, authored a report entitled "A University Looks at the Forest Service." This critical evaluation, referred to as the Bolle Report, of Forest Service timber harvesting and reforestation practices in Bitterroot National Forest prompted national debate on clearcutting.

The Youth Conservation Corps program (P.L. 91-378; 84 Stat. 794), was signed into law on August 13. This act was intended to establish, for three years, a pilot Youth Conservation Corps to further the development and maintenance of the natural resources by America's youth. The act authorized the Secretaries of Agriculture and the Interior to establish camps for young men and women between the ages of 15 and 19 (the YCC was expanded in 1972 [92-597] and given permanent authorization in 1974 [93 Stat. 408]).

The Geothermal Steam Act of 1970, signed into law on December 24 (P.L. 91-581; 84 Stat. 1566), empowered the Secretary of the Interior to issue leases for geothermal resources on public lands.

The Clean Air Act of 1970 was signed into law on December 31. It was designed "to protect and enhance the quality of the Nation's air resources so as to promote the public wealth and welfare and the productive capacity of its population." The act also provided for research and assistance to state and local governments who were designated as having the primary responsibility to control air pollution at its source. The act and subsequent implementing regulations provided for establishing national air quality standards; state implementation plans; national emission standards for hazardous air pollutants; inspections and monitoring; and prevention of a significant deterioration of the nation's air quality.

1971

The Report of the Public Land Law Review Commission issued, generating considerable controversy concerning its commodity and disposition orientation.

"Church Guidelines" for clearcutting were published after the Senate Subcommittee on Public Lands investigation of national forest harvest techniques. The guidelines were immediately adopted as clearcutting policy by Forest Service.

The Oregon Forest Practices Act enacted.

Charles A. Connaughton retired as Regional Forester. He was replaced by Rexford "Rex" A. Resler.

1972

"Sierra Club v. Butz" declared that all areas contiguous to a wilderness or primitive area must be protected as wilderness pending Congressional actions on inclusion of area in wilderness system.

Executive Order 11644 (February 8) instructed agency and department heads to issue regulations controlling the use of off-road vehicles on public lands.

"Sierra Club v. Morton," also known as the "Mineral King" case, clarified the "standing" criteria in environmental litigation initiated by reformers acting as "private attorneys general." Justice William O. Douglas's frequently cited dissenting opinion posed question of tree's right to sue on own behalf.

The Volunteers in the National Forests Act of 1972 (P.L. 92-300; 86 Stat. 147) was enacted on May 18. The act authorized the Secretary of Agriculture to recruit and train volunteers to assist in Forest Service activities.

The Clean Water Amendments (P.L. 92-500; 86 Stat. 816), otherwise known as the "Federal Water Pollution Control Act Amendments of 1972," was enacted on October 18 to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The act established goals for the eventual elimination of discharge pollutants; prohibited the discharge of toxic pollutants in toxic amounts; and enabled areawide waste treatment management planning to assure controls over sources of pollution. The act also set standards and minimum requirements for the control and abatement of water pollution. Section 208 included controlling nonpoint sources of pollution, such as agriculture, silviculture, and mining operations.

Edward P. Cliff resigned as Chief of the Forest Service. He was replaced by John R. McGuire.

Rex Resler transferred to the Washington Office. He was replaced as Regional Forester by Theodore A. Schapfler.

1973

The Endangered Species Act of 1973 (P.L. 93-205; 87 Stat. 884) was signed into law on December 28. The act established Federal procedures for identification and protection of endangered plants and animals in their critical habitats. It declared broad prohibitions against taking, hunting, harming, or harassing listed species, and was intended, in large part, through cooperative Federal and state efforts, to restore endangered populations to a level where protection no longer necessary.

A Federal District Court decision in "West Virginia Division of Izaak Walton League v. Butz" commenced the litigation phase of the Monongahela NF controversy with ruling that Forest Service harvesting practices violated provision of the 1897 Organic Act.

The Agricultural and Consumer Protection Act created under Title X of Forestry Incentives Program (FIP) to authorize financial assistance through long-term contracts with owners of nonindustrial private forest lands. Funds provided for tree planting and timber stand improvement to enhance productivity of nation's small private forests.

1974

The "Archaeological Conservation Act" of May 24 (P.L. 93-291; 88 Stat. 174) amended the Reservoir Salvage Act of 1960 such that all Federal agencies were authorized to spend project funds for inventory, salvage, and analysis of cultural resources to be affected by the project.

The Woodsy Owl/Smokey Bear Act (P.L. 93-318; 88 Stat. 244), signed into law on June 22. added the name and character Woodsy Owl, and the slogan "Give a Hoot, Don't Pollute", to the Smokey Bear Act of 1952.

The Forest and Rangeland Renewable Resources Planning Act (RPA) (P.L. 93-378; 88 Stat. 476), signed into law on August 17, directed the Forest Service to undertake long-range planning to ensure adequate timber supply and maintenance of environmental quality. Forest Service required to prepare a decennial assessment of renewable resource supply and demand and update management program at five-year intervals.

The Freedom of Information Act (P.L. 93-502; 88 Stat. 1561) was signed into law on November 21. This act allowed the opportunity for public review of all Federal agencies records and decisions. Such information was to be made available within 20 working days, unless the request was extended for "unusual circumstances." The act did not apply to information directly related to personnel matters, trade secrets, confidential commercial or financial data from outside companies, medical files, ongoing law enforcement investigations, geological information about wells, and other material exempted from public disclosure.

The "Conti decision," an out-of-court settlement of a Sierra Club suit brought against Forest Service for failure to prepare an EIS on Roadless Area Review and Evaluation (RARE) areas prior to development activities, prohibited alteration of any de facto wilderness pending completion of land use planning process.

The Safe Water Drinking Act of 1974 was signed into law on December 16. The purpose of the act was to assure that potable water systems serving the public meet minimum national standards. The act allowed the Environmental Protection Agency (EPA) to establish standards for public water systems.

1975

The initial "Monongahela" decision was upheld by Fourth Circuit Court of Appeals, setting stage for legislative remedy of the inadequacies in the Organic Act of 1897 (Izaak Walton League v. Butz).

1976

The Federal Land Policy and Management Act (FLPMA) (P.L. 94-579; 90 Stat. 2743), enacted for the Bureau of Land Management on October 21, authorized multiple use management of public lands, and declared government policy of retaining public lands in Federal ownership.

The National Forest Management Act (NFMA) of 1976 (P.L. 94-588; 90 Stat. 2949), signed into law on October 22, repealed language of 1897 Organic Act which prompted the Monongahela NF litigation, extensively amended the RPA planning process, and provoked controversy on nondeclining even flow and other key aspects of intensive management. The act also mandated greater public participation in Forest Service decision making and authorized $200 million annually for reforestation work. The act also established a "committee of scientists" to help write the regulations that the Forest Service would follow to implement the new law.

The Omnibus Wilderness Act designated 19 wildernesses in 13 states.

1977

RARE II, a second roadless area review, was undertaken by Forest Service in an effort to speed up designation.

The Young Adult Conservation Corps (YACC) program, included in Title VIII of the Comprehensive Employment and Training Act of 1977 (P.L. 95-93), was intended to further the development and maintenance of the natural resources by America's young adults. The act authorized the Secretaries of Agriculture and the Interior to establish projects and camps for young men and women between the ages of 16 and 23, with being paid. minimum wage for a 12-month enrollment (the YACC funding was eliminated in 1981 and the Act expired in 1982.)

The Clean Air Act Amendments of 1977 (P.L. 95-95; 91 Stat. 685), signed into law on August 7, was concerned, in part, with forest management activities, such as prescribed burning, and natural occurrences, such as fire, which have attendant air quality impacts. The act gave a Class II air quality designation to all wildernesses created after August 7, 1977. The act also listed as Class I (the highest air quality) areas: National parks over 6,000 acres and national memorial parks and wildernesses over 5,000 acres. All other areas were considered as Class II areas,

however, many of these areas could be recommended by the Forest Service to the state for redesignation as Class I areas.

The Clean Water Act of 1977 (P.L. 95-190; 91 Stat. 1393), otherwise known as the "Safe Drinking Water Amendments of 1977", was signed into law on November 16 (it was a series of amendments to the Safe Drinking Water Act of 1974). The Clean Water Act required, among other items, that Federal agencies comply with all Federal, state, and local requirements for clean drinking water.

Ted Schlapfer retired and was replaced by Richard E. Worthington as Regional Forester.

1978

The Endangered American Wilderness Act designated largest single addition in the National Wilderness Preservation System, totaling 1.3 million acres in 10 western states.

The National Forest Management Act (NFMA) provision which authorized the use of sealed bids for timber sales was repealed.

Congress passed an amendment to Endangered Species Act which modified act's rigid mandate in favor of allowing exemptions in specific cases, determined by a special cabinet-level committee.

The American Indian Religious Freedom Act (AIRFA) (P.L. 95-341; 92 Stat. 469), signed into law on August 11, stated that Federal agencies are to evaluate policies and programs in consultation with Native American religious leaders in order to determine appropriate changes necessary to protect and preserve Native American religious cultural rights and practices. Also gave access to traditional cultural religious areas and sites within the national forests and other public lands.

1979

The Archaeological Resources Protection Act (ARPA) was enacted on October 31 to protect the "...archaeological resources and sites which are on public lands and Indian lands, and to foster increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals...." The act also revised the permit procedures to excavate sites and remove artifacts from public lands. Additionally, the act specified the appropriate custody of cultural resources, prohibited acts and criminal penalties, civil penalties, rewards (not to exceed $500), and forfeiture of all vehicles and equipment used to violate provisions of the act.

John R. McGuire retired as Chief of the Forest Service and was replaced by R. Max Peterson.

1980

Mt. Saint Helens, on the Gifford Pinchot National Forest, had a massive volcanic eruption on May 18, 1980. Heavy amounts of ash were deposited across Washington State, Idaho, and Montana, while dust from the explosion darkened the skies on the east coast.

The Alaska National Interest Lands Conservation Act (P.L. 96-487; 94 Stat. 2371) of December 2, provided access to nonfederally owned land within the boundaries of the national forests and other public lands.

The National Historic Preservation Act Amendments (P.L. 96-515; 94 Stat. 2987) of December 12, provided that the Federal government encourage, expand, administer, and cooperate (including financial and technical assistance) with other nations, states, local governments, Indian tribes, and private organizations and individuals to preserve prehistoric and historic resources for the present and future. The amendments also provided that the Secretary of the Interior would promulgate or revise regulations for locating, inventorying, and nominating sites to the National Register of Historic Places. In addition, the responsible agencies were authorized to withhold from public disclosure public records containing information that may create a substantial risk of harm, theft, or destruction of cultural resources or area or place where they are located.

The Wood Residue Utilization Act of 1980 (P.L. 96-554; 94 Stat. 3257), signed into law on December 19, provided that the Forest Service and BLM develop, demonstrate, and "...make available information on feasible methods...to increase and improve utilization...of wood residues resulting from timber harvesting and forest protection and management activities occurring on public and private forest lands...." The act included provisions for pilot projects and demonstrations. Effective date was October 1, 1981.

1982

The Mt. Saint Helens National Volcanic Monument was established.

Dick Worthington retired as Regional Forester and was replaced by Jeff M. Sirmon.

1983

The Small Tracts Act (P.L. 97-465; 96 Stat. 2535) of January 22 authorized the Forest Service to sell, exchange, or interchange national forest lands, of not more than $150,000 value, for private lands of equivalent value. The act was especially designed to deal with parcels of land 40 acres or less.

1984

The Oregon Wilderness Act of 1984 was signed into law on June 26. The act added 846,000 acres of wilderness in the State of Oregon, plus the unique Oregon Cascades Recreation Area (OCRA). The Willamette NF gained the Bull of the Woods (mostly on the Mt. Hood NF),

Menagerie, Middle Santiam, and Waldo Lake Wildernesses, as well as additions to the existing wildernesses. The 157,000-acre OCRA has portions located on the Willamette, Deschutes, Umpqua, and Winema National Forests. The OCRA contains the Mt. Thielsen Wilderness on the Umpqua and Winema NFs and the 1984 additions to the Diamond Peak Wilderness.

The Federal Timber Contract Payment Modification Act, often referred to as the "Timber Relief Act," provided that eligible timber operators could turn back up to 55 percent of their uncut (high bid price) Forest Service and BLM timber sales to a maximum of 200 MMBF per company. There was 10 billion board feet of uncut, high-priced sales in the U.S., with 7 billion board feet of these in Oregon and Washington. The act also set a cap on Forest Service timber sales in the Northwest. One provision of the act was that the "turned back" sales had to be re-offered as part of the yearly timber sales rather than as sales above the existing timber.

1985

Regional Forester Jeff Sirmon transferred to the Washington Office. He was replaced in September by Charles T. "Tom" Coston from Region One.

The Reagan administration proposed to transfer or interchange certain USDI Bureau of Land Management and USDA Forest Service lands in the West. After considerable public and Congressional outcry, the proposal was considered "dead," although it has not been withdrawn by the administration.

1986

The Columbia River Gorge National Scenic Area was signed into law on November 17. It was originally comprised of 277,000 acres (since expanded), with the Forest Service to administer 108,000 acres, a 13-member commission from Oregon and Washington to manage 141,000 acres, with the remainder in 12 urban areas exempted from management controls.

1987

R. Max Peterson retired on February 2nd as Chief of the Forest Service and is its first Chief Emeritus. With this new title, Peterson agreed to undertake special projects for the Forest Service. Peterson was succeeded by F. Dale Robertson, who worked for a number of years in the Southern Region and the Pacific Northwest Region.

Regional Forester Tom Coston retired unexpectedly after a few months. He was replaced on April 7th by James F. Torrence from Region Two (Rocky Mountain Region). Torrence served previously as Deputy Regional Forester for resources in the Pacific Northwest Region from 1977-1984.

After an unusually dry spring and hot summer, a huge "Lightning Bust" hit northern California and southern Oregon on August 30th and September 1st. The dry lightning storm left a trail of thousands of recorded lightning strikes over a two day period causing hundreds of fires. The Willamette NF had 74 fires from this storm. Several of these fires burned into large fire

"complexes" frustrating fire fighters from around the nation and Canada for months. The Silver Fire on the Siskiyou National Forest was finally extinguished in November after the late fall rains finally came.

A spotted owl interagency agreement between the Forest Service and the USDI Fish & Wildlife Service was signed on December 12th. The purpose of the agreement was to strengthen "the commitment of both agencies to ensure population viability of spotted owls." In that memorandum of understanding, both agencies agreed that the amount and distribution of habitat was crucial to the survival of the owl. Monitoring of forest plans, as well as future research and inventory, was part of the agreement. Cooperation and sharing of information on the owls was considered to be a very important step in managing spotted owl habitat.

The Clean Water Act of 1987 was a series of amendments to the Clean Water Act of 1972. Basically, the new act was an attempt to address problems of the 1972 act, especially regarding nonpoint pollution sources, including agriculture, silviculture, and mining operations. In addition, section 319 addressed nonpoint pollution on forest streams and lakes. Other sections provided for "demonstration watersheds"; grants and loans to the states; control over stormwater discharges and sewage sludge; established a clean lakes program; a Chesapeake Bay program; and other provisions including penalties.

1988

Publication of the long awaited and very controversial final SEIS (Supplement to the Amendment to the Regional Guide EIS for spotted owls) was published in July. This two volume publication was the result of several appeals of the Regional Guide (1984) and political concessions to both the timber industry and environmental groups. The draft of the SEIS was published in 1986. The Region received a total of 40,820 responses to the draft SEIS.

The Omnibus Oregon Wild and Scenic Rivers Act of 1988 (P.L. 100-557) was signed by the President on October 28, 1988. This act amended the Wild and Scenic Rivers Act of 1968 (P.L. 90-542) to include 1,428 miles along 40 river segments in Oregon for inclusion in the National Wild and Scenic Rivers System and directed the Forest Service and Bureau of Land Management (BLM) to develop management plans for each river. In addition, the act also specified portions of seven rivers to be studied as to their suitability for National Wild and Scenic River System designation. For the Willamette National Forest, the two new wild and scenic rivers were: McKenzie River (12.7 miles from Clear Lake to Scott Creek) and North Fork of the Willamette River (42.5 miles from Waldo Lake to the forest boundary). Two study segments on the Willamette NF were the Blue River (from the headwaters to Blue River Reservoir) and the South Fork of the McKenzie River (from the headwaters to the upper end of Cougar Reservoir and from the lower end of Cougar Reservoir to the McKenzie River).

Publication of another very controversial final EIS regarding the management of competing and unwanted vegetation (especially how the Forest Service was going to handle the use of herbicides) was published in November. This six volume publication was the result of a 1983 law suit on the FEIS *Methods of Managing Competing Vegetation* (1981). There were widespread concerns that the Region had not previously addressed all methods of managing

unwanted trees, shrubs, bushes, and grasses. In addition, there was great concern about the health of people that might be exposed to various herbicides during intensive timber management operations. This lawsuit resulted in a judgment and injunction against the Forest Service, BLM, and the EPA in 1984 which prohibited the use of herbicides until a worst case analysis was completed. A draft EIS was published in October, 1987. A total of about 4,900 responses were received on the draft.

The Oregon Scenic Waterway initiative (Ballot Measure #7), sponsored by the Oregon Rivers Council and other environmental groups, was passed by the voters of Oregon at the November general election. The initiative added 496 miles along 11 river segments as Oregon Scenic Waterways: Lower and upper Clackamas River; lower and portions of the upper Deschutes River; Elk River; Grande Ronde River; Illinois River; lower portions and the North, Middle, and South Forks of the John Day River; upper Klamath River; South Fork and upper McKenzie River; Metolius River; Minam River; Nestucca River/Walker Creek; Owyhee River; lower and upper Rogue River; Sandy River; Little North Fork of the Santiam River; No. Umpqua River; Wallowa River; and North Fork of the Willamette River, including Waldo Lake. Placement in the Oregon Scenic Waterways means that the state will prohibit placer mining and will regulate lode or hardrock mining within the scenic corridor.

APPENDICES

CHRONOLOGICAL ESTABLISHMENT OF THE WILLAMETTE NATIONAL FOREST, 1891-1990

HISTORIC EVENT	ACTION BY GOVERNMENT	DATE	REFERENCE
Beginning of the Forest Reserve system in U.S.	Forest Reserve (Creative) Act of 1891.	3/3/1891	26 Stat. 1095
Cascade Range Forest Reserve (FR) created.	Presidential Proclamation.	9/28/1893	28 Stat. 1240
Management of the FRs authorized by Congress.	Sundry Civil Appropriations Act (Organic) Act of 1897.	6/4/1897	30 Stat. 11
Organization of the Cascade Range FR.	Administrative separation of the CRFR into a Northern, Central, and Southern Divisions. Headquarters at Salem.	1898	
Cascade Range FR boundary modifications.	EO — land released.	4/29/1898	
Cascade Range FR boundary modifications.	EO — land released.	4/6/1899	
Cascade Range FR boundary modifications.	EO — land released.	6/29/1901	
Cascade Range FR boundary modifications.	Proclamation — land added.	7/1/1901	32 Stat. 1972
Cascade Range FR administrative changes.	Internal reorganization combined the three divisions into two: Northern and Southern.	1902	
Transfer of the Forest Reserve administration from Dept. of Interior (General Land Office) to Dept. of Agriculture Bureau of Forestry.	Transfer Act of Congress.	2/1/1905	33 Stat. 628

Creation of the Forest Service from the Bureau of Forestry.	Act of Congress.	7/1/1905	33 Stat. 861 and 872
Cascade Range FR boundary modifications.	Proclamation — land added.	1/25/1907	34 Stat. 3270
Cascade Range FR name changed to Cascade FR.	Proclamation — change of name and land added.	3/2/1907	34 Stat. 3300
Umpqua Forest Reserve created in Coast Range.	Proclamation — Forest Reserve created from Public Domain land.	3/2/1907	34 Stat. 3301
All Forest Reserve names changed to National Forest (NF) designation.	Act of Congress	4/4/1907	34 Stat. 1269
Cascade NF boundary modifications.	EO — Portions of the larger Cascade NF were separated into the Oregon, Cascade, Umpqua, Crater, and Deschutes NFs.	6/30/1908 effective 7/1/1908	EO 863
Cascade NF boundary modifications.	Proclamation #1130 — land transferred to the Deschutes, Paulina, and Santiam NFs. Land added from the Umpqua NF.	6/7/1911 effective 7/1/1911	37 Stat. 1684
Santiam NF created.	Proclamation #1163 — land transferred from the Oregon and Cascade NFs.	6/30/1911 effective 7/1/1911	37 Stat. 1712
Willamette NF created.	EO — Combined the Santiam and Cascade NFs to create the Willamette NF.	4/6/1933 effective 7/1/1933	EO 6104
Willamette NF boundary modifications.	Proclamation 2151 — added land.	12/7/1935	49 Stat. 3486
Willamette NF boundary modifications — O & C Railroad grant lands exchange to the Bureau of Land Management (BLM).	Joint Secretaries of Agriculture and Interior Order No. 69332 for the exchange of administrative jurisdiction of small portions of the O&C Railroad Grant land to the BLM.	6/12/1956 (U.S.D.A.) 6/21/1956 (U.S.D.I.)	21-FR 4525

Willamette NF boundary modifications.	Public Land Order 1885 — eliminated lands.	6/25/1959	24-FR 5371
Willamette NF boundary modifications.	Public Land Order 2149 — transferred lands to the Umpqua NF and eliminated other lands.	7/1/1960	25-FR 6435

(THE CASCADE RANGE FOREST RESERVE.)

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

Whereas, it is provided by section twenty-four of the Act of Congress, approved March third, eighteen hundred and ninety-one, entitled, "An act to repeal timber-culture laws, and for other purposes," "That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof;"

And Whereas, the public lands in the State of Oregon, within the limits herein after described, are in part covered with timber, and it appears that the public good would be promoted by setting apart and reserving said lands as a public reservation.

Now, Therefore, I, GROVER CLEVELAND, President of the United States, by virtue of the power in me vested by section twenty-four of the aforesaid Act of Congress, do hereby make known and proclaim that there is hereby reserved from entry or settlement and set apart as a Public Reservation, all those certain tracts, pieces or parcels of land lying and being situate in the State of Oregon, and particularly described as follows, to-wit:

Beginning at the meander corner at the intersection of the range line between Ranges six (6) and seven (7) East, Township two (2) North, Willamette Meridian, Oregon, with the mean high-water-mark on the south bank of the Columbia River in said State; thence northeasterly along said mean high-water-mark to its intersection with the township line between Townships two (2) and three (3) North; thence easterly along said township line to the north-east corner of Township two (2) North, Range eight (8) East; thence southerly along the range line between Ranges eight (8) and nine (9) East, to the south-west corner of Township two (2) North, Range nine (9) East; thence westerly along the township line between Townships one (1) and two (2) North, to the north-west corner of Township one (1) North, Range nine (9) East; thence southerly along the range line between Ranges eight (8) and nine (9) East, to the south-west corner of Township one (1) North, Range nine (9) East; thence easterly along the Base Line to the north-east corner of Township one (1) South, Range ten (10) East; thence southerly along the range line between Ranges ten (10) and eleven (11) East, to the south-east corner of Township four (4) South, Range ten (10) East; thence westerly along the township line between Townships four (4) and five (5) South, to the south-west corner of Township four (4) South, Range nine (9) East; thence southerly along the west boundary of Township five (5) South, Range nine (9) East, to its intersection with the west boundary of the Warm Springs Indian Reservation; thence southwesterly along said Indian reservation boundary to the south-west corner of said reservation; thence south-easterly along the south boundary of said

Indian reservation to a point on the north line of section three (3), Township twelve (12) South, Range nine (9) East, where said boundary crosses time township line between Townships eleven (11) and twelve (12) South, Range nine (9) East; thence easterly to the north-east corner of Township twelve (12) South, Range nine (9) East; thence southerly along the range line between Ranges nine (9) and ten (10) East, to the south-east corner of Township thirteen (13) South, Range nine (9) East; thence westerly along the Third (3rd) Standard Parallel South, to the north-east corner of Township fourteen (14) South, Range nine (9) East; thence southerly along the range line between Ranges nine (9) and ten (10) East, to the south-east corner of Township fifteen (15) South, Range nine (9) East; thence easterly along the Third (3rd) Standard Parallel South, to the north-east corner of Township sixteen (16) South, Range nine (9) East; thence southerly along the range line between Ranges nine (9) and ten (10) East, to the south-east corner of Township twenty (20) South, Range nine (9) East; thence easterly along the Fourth (4th) Standard Parallel South, to the north-east corner of Township twenty-one (21) South, Range nine (9) East; thence southerly along the range line between Ranges nine (9) and ten (10) East, to the south-east corner of Township twenty-three (23) South, Range nine (9) East; thence westerly along the township line between Townships twenty-three (23) and twenty-four (24) South, to the south-east corner of Township twenty-three (23) South, Range six (6) East; thence southerly along the range line between Ranges six (6) and seven (7) East, to the south-west corner of Township twenty-five (25) South, Range seven (7) East; thence westerly along the Fifth (5th) Standard Parallel South, to the point for the north-west corner of Township twenty-six (26) South, Range seven (7) East; thence southerly along the surveyed and unsurveyed west boundaries of Townships twenty-six (26), twenty-seven (27), twenty-eight (28), twenty-nine (29) and thirty (30) South, to the south-west corner of Township thirty (30) South, Range seven (7) East; thence westerly along the unsurveyed Sixth (6th) Standard Parallel South, to the point for the north-west corner of Township thirty-one (31) South, Range seven and one-half (7-1/2) East; thence southerly along the surveyed and unsurveyed west boundaries of Townships thirty-one (31), thirty-two (32) and thirty-three (33) South, Range seven and one-half (7-1/2) East, to the south-west corner of Township thirty-three (33) South, Range seven and one-half (7-1/2) East; thence easterly along the township line between Townships thirty-three (33) and thirty-four (34) South, to the north-east corner of Township thirty-four (34) South, Range six (6) East; thence southerly along the east boundaries of Townships thirty-four (34) and thirty-five (35) South, Range six (6) East, to the point of intersection of the east boundary of Township thirty-five (35) South, Range six (6) East, with the west shore of Upper Klamath Lake; thence along said shore of said lake to its intersection with the range line between Ranges six (6) and seven (7) East, in Township thirty-six (36) South; thence southerly along the range line between Ranges six (6) and seven (7) East, to the south-east corner of Township thirty-seven (37) South, Range six (6) East; thence westerly along the township line between Townships thirty-seven (37) and thirty-eight (38) South, to the south-west corner of Township thirty-seven (37) South, Range four (4) East; thence northerly along the range line between Ranges three (3) and four (4) East, to the north-west corner of Township thirty-six (36) South, Range four (4) East; thence easterly along the Eighth (8th) Standard Parallel South, to the south-west corner of Township thirty-five (35) South, Range four (4) East; thence northerly along the range line between Ranges three (3) and four (4) East, to the south-west corner of Township thirty-one (31) South, Range four (4) East; thence westerly along the township line between Townships thirty-one (31) and thirty-two (32) South, to the south-west corner of Township thirty-one (31) South, Range one (1) East; thence northerly along the surveyed and unsurveyed Willamette Meridian to the north-west corner of Township twenty (20) South, Range one (1) East; thence easterly along

the township line between Townships nineteen (19) and twenty (20) South, to the north-east corner of Township twenty (20) South, Range one (1) East; thence northerly along the range line between Ranges one (1) and two (2) East, to the north-west corner of Township eighteen (18) South, Range two (2) East; thence easterly along the township line between Townships seventeen (17) and eighteen (18) South, to the south-east corner of Township seventeen (17) South, Range two (2) East; thence northerly along the range line between Ranges two (2) and three (3) East, to the south-west corner of Township seventeen (17) South, Range three (3) East; thence easterly along the surveyed and unsurveyed township line between Townships seventeen (17) and eighteen (18) South, to the point for the south-east corner of Township seventeen (17) South, Range four (4) East; thence northerly along the surveyed and unsurveyed range line between Ranges four (4) and five (5) East, subject to the proper easterly or westerly offsets on the Third (3rd) Second (2nd) and First (1st) Standard Parallels South, to the north-west corner of Township five (5) South, Range five (5) East; thence easterly along the township line between Townships four (4) and five (5) South, to the southeast corner of Township four (4) South, Range six (6) East; thence northerly along the range line between Ranges six (6) and seven (7) East, to the north-west corner of Township four (4) South, Range seven (7) East; thence easterly along the township line between Townships three (3) and four (4) South, to the southwest corner of Section thirty-four (34), Township three (3) South, Range seven (7) East; thence northerly along the surveyed and unsurveyed section line between Sections thirty-three (33) and thirty-four (34), twenty-seven (27) and twenty-eight (28), twenty-one (21) and twenty-two (22), fifteen (15) and sixteen (16), nine (9) and ten (10) and three (3) and four (4), to the north-west corner of Section three (3) of said Township and Range; thence easterly along the surveyed and unsurveyed township line between Townships two (2) and three (3) South, to the point for the south-east corner of Township two (2) South, Range eight (8) East; thence northerly along the unsurveyed range line between Ranges eight (8) and nine (9) East, to the south-east corner of Township one (1) South, Range eight (8) East; thence westerly along the township line between Townships one (1) and two (2) South, to the south-east corner of Section thirty-four (34), Township one (1) South, Range eight (8) East; thence northerly along the section line between Sections thirty-four (34) and thirty-five (35), twenty-six (26) and twenty-seven (27), and twenty-two (22) and twenty-three (23) to the north-east corner of Section twenty-two (22); thence westerly along the section line between Sections fifteen (15) and twenty-two (22) to the south-east corner of Section sixteen (16); thence northerly on the section line between Sections fifteen (15) and sixteen (16) to the point for the north-east corner of Section sixteen (16); thence westerly along the section line between Sections nine (9) and sixteen (16) to the southeast corner of Section eight (8); thence northerly along the section line between Sections eight (8) and nine (9) and four (4) and five (5) to the north-west corner of Section four (4), Township one (1) South, Range eight (8) East; thence easterly along the Base Line to the south-east corner of Section thirty-three (33), Township one (1) North, Range eight (8) East; thence along the unsurveyed section lines northerly to the point for the north-east corner of Section thirty-three (33), westerly to the point for the north-east corner of Section thirty-two (32), northerly to the point for the north-east corner of Section eight (8), westerly to the point for the south-west corner of Section six (6); thence northerly along the unsurveyed range line between Ranges seven (7) and eight (8) East, to the point for the northwest corner of Township one (1) North, Range eight (8) East; thence westerly along the unsurveyed township lines between Townships one (1) and two (2) North, to the north-west corner of Township one (1) North, Range seven (7) East; thence northerly along the surveyed and unsurveyed range line between Ranges six (6) and seven (7) East,

to the mean der corner at its intersection with the mean high-water-mark on the south bank of the Columbia River, the place of beginning.

Excepting from the force and effect of this proclamation all lands which may have been, prior to the date hereof, embraced in any legal entry or covered by any lawful filing duly of record in the proper United States Land Office, or upon which any valid settlement has been made pursuant to law, and the statutory period within which to make entry or filing of record has not expired; and all mining claims duly located and held according to the laws of the United States and rules and regulations not in conflict therewith;

Provided that this exception shall not continue to apply to any particular tract of land unless the entryman, settler or claimant continues to comply with the law under which the entry, filing, settlement or location was made.

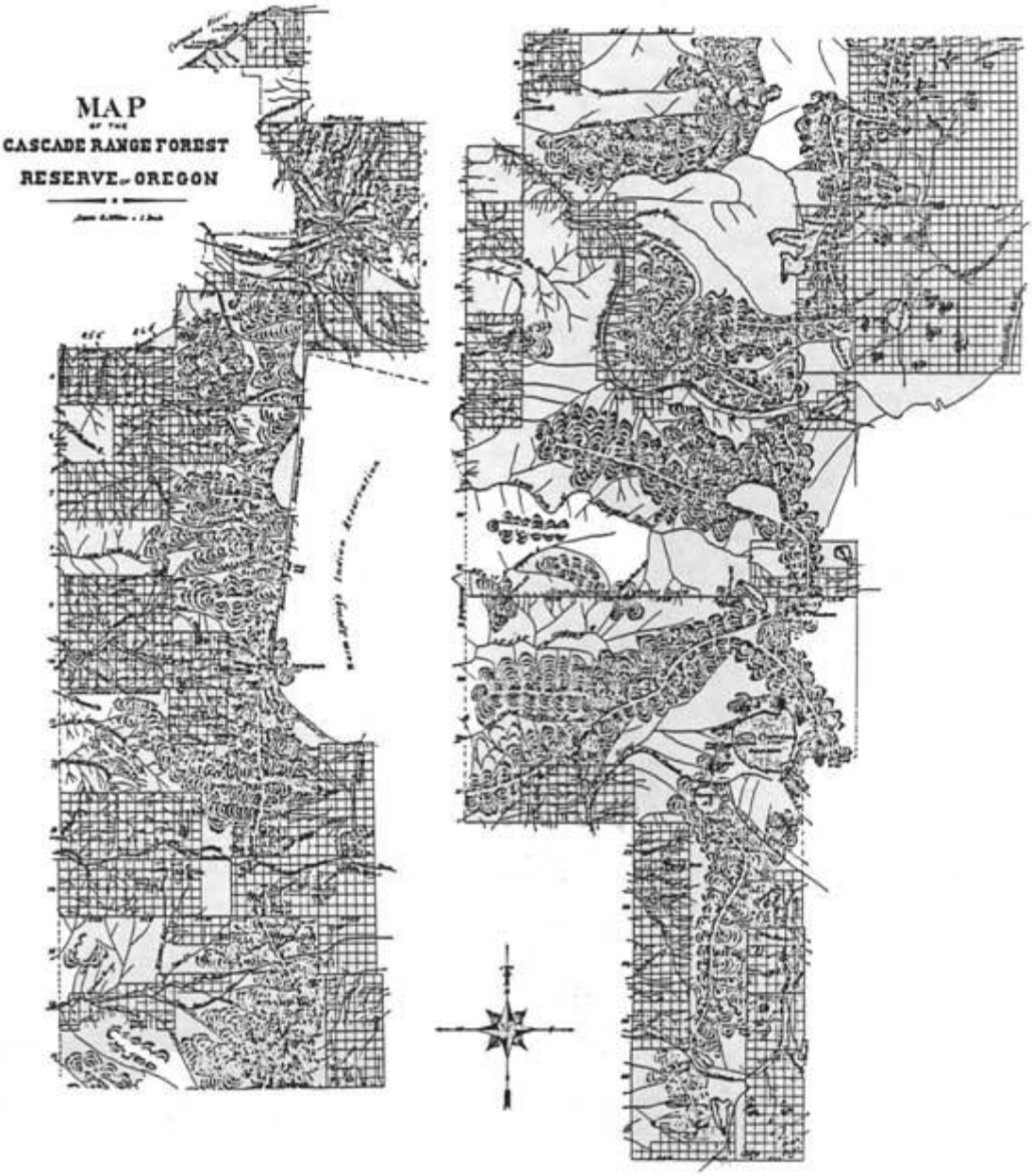
Warning is hereby expressly given to all persons not to enter or make settlement upon the tract of land reserved by this proclamation.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington, this twenty eighth day of September, in the year of our Lord, one thousand, eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

GROVER CLEVELAND.

BY THE PRESIDENT:
ALVEY A. ADEE,
Acting Secretary of State.


MAP
OF THE
CASCADE RANGE FOREST
RESERVE IN OREGON

THE CASCADE RANGE FOREST RESERVE.
(SECOND PROCLAMATION.)

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

WHEREAS, The Cascade Range Forest Reserve, in the State of Oregon, was established by proclamation dated September 28, 1893, under and by virtue of section twenty-four of the Act of Congress, approved March third, eighteen hundred and ninety-one, entitled, "An act to repeal timber-culture laws, and for other purposes", which provides, "That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof"

And whereas, it is further provided by the Act of Congress, approved June fourth, eighteen hundred and ninety-seven, entitled, "An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-eight, and for other purposes", that "The President is hereby authorized at any time to modify any Executive order that has been or may hereafter be made establishing any forest reserve, and by such modification may reduce the area or change the boundary lines of such reserve, or may vacate altogether any order creating such reserve".

Now, therefore, I, WILLIAM MCKINLEY, President of the United States, by virtue of the power vested in me by the aforesaid act of Congress, approved June fourth, eighteen hundred and ninety-seven, do hereby make known and proclaim that there is hereby reserved from entry or settlement, and added to and made a part of the aforesaid Cascade Range Forest Reserve, all those certain tracts, pieces or parcels of land lying and being situate in the State of Oregon and particularly described as follows, to wit:

The south half (S. 1/2) of Township one (I) South, Townships two (2) South, three (3) South, and four (4) South, Range eleven (11) East, Willamette Meridian; Townships five (5) South, Ranges nine (9) and ten (10) East: and so much of Townships six (6) South, Ranges nine (9) and ten (10) East, as lies north of the Warm Springs Indian Reservation.

Excepting from the force and effect of this proclamation all lands which may have been, prior to the date hereof, embraced in any legal entry or covered by any lawful filing duly of record in the proper United States Land Office, or upon which any valid settlement has been made pursuant to law, and the statutory period within which to make entry or filing of record has not

expired: *Provided,* that this exception shall not continue to apply to any particular tract of land unless the entryman, settler or claimant continues to comply with the law under which the entry, filing or settlement was made.

Warning is hereby expressly given to all persons not to make settlement upon the tract of land reserved by this proclamation.

In Witness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington this first day of July, in the year of our Lord one thousand, nine hundred and one, and of the Independence of the United States the one hundred and twenty-fifth.

WILLIAM McKINLEY

By the President:
DAVID J. HILL,
Acting Secretary of State.

THE CASCADE RANGE FOREST RESERVE
OREGON
(THIRD PROCLAMATION.)

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

WHEREAS, the Cascade Range Forest Reserve, in the State of Oregon, was established by proclamation dated September twenty-eighth, eighteen hundred and ninety-three, and the boundaries thereof have been subsequently changed to include additional lands in the State of Oregon, and also to exclude from the reserve certain lands in said State;

And whereas it appears that the public good would be promoted by further adding to the said forest reserve certain lands, in the State of Oregon, which are in part covered with timber;

Now, therefore, I, THEODORE ROOSEVELT, President of the United States of America, by virtue of the power in me vested by the Act of Congress, approved June fourth, eighteen hundred and ninety-seven, entitled, "An Act Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-eight, and for

other purposes," do proclaim that the aforesaid Cascade Range Forest Reserve is hereby further enlarged to include the said additional lands, and that the boundaries of the reserve are now as shown on the diagram forming a part hereof;

Excepting from the force and effect of this proclamation all lands which are at this date embraced in any legal entry or covered by any lawful filing or selection duly of record in the proper United States Land Office, or upon which any valid settlement has been made pursuant to law, and the statutory period within which to make entry or filing of record has not expired; and also excepting all hands which at this date are embraced within any withdrawal or reservation for any use or purpose to which this reservation for forest uses is inconsistent: Provided, that these exceptions shall not continue to apply to any particular tract of land unless the entryman, settler, or claimant continues to comply with the law under which the entry, filing, or settlement was made, or unless the reservation or withdrawal to which this reservation is inconsistent continues in force; not excepting from the force and effect of this proclamation, however, any land within the boundary herein described, which has been withdrawn to protect the coal therein but this proclamation does not vacate any??? such coal land withdrawal; and provided that these exceptions shall not apply to any land embraced in any selection, entry or filing, which has been allowed or permitted to remain of record subject to the creation of a permanent reservation.

Warning is hereby given to all persons not to make settlement upon the lands reserved by this proclamation.

In Witeness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington this 25th day of January, in the year of our Lord one thousand nine hundred and seven, and of the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT

By the President:
ELIHU ROOT
Secretary of State.

CASCADE RANGE FOREST RESERVE

OREGON

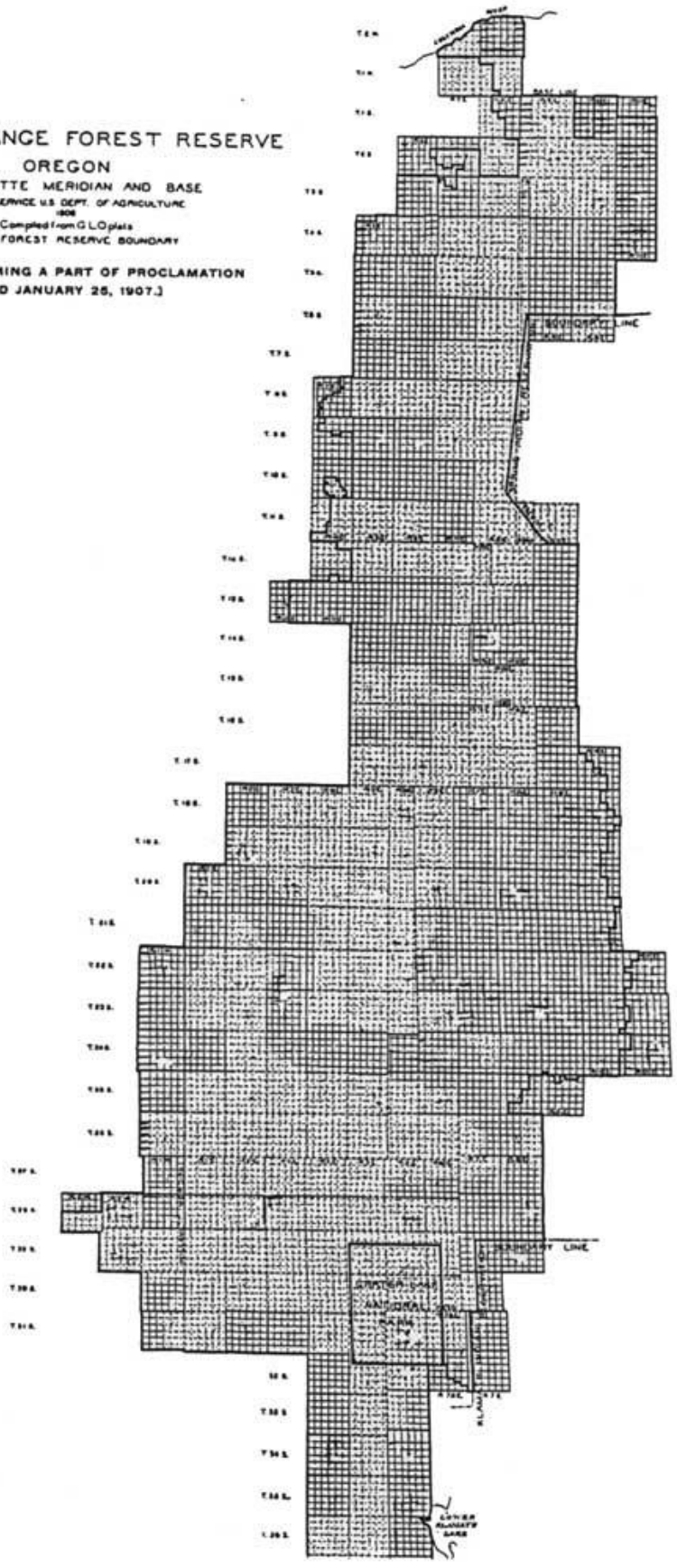
WILLAMETTE MERIDIAN AND BASE

FOREST SERVICE U.S. DEPT. OF AGRICULTURE
1908

Compiled from G.L.O. plats

——— FOREST RESERVE BOUNDARY

[DIAGRAM FORMING A PART OF PROCLAMATION
DATED JANUARY 25, 1907.]



THE CASCADE RANGE FOREST RESERVE
OREGON
(FOURTH PROCLAMATION.)

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

WHEREAS, the Cascade Forest Reserve, in the State of Oregon, was established by proclamation dated September twenty-eighth, eighteen hundred and ninety-three, under the name of The Cascade Range Forest Reserve, and the boundaries thereof have been subsequently changed to include additional lands in the State of Oregon, and also to exclude from the reserve certain lands;

And whereas, it appears that the public good would be promoted by further adding to the said forest reserve certain lands, in the State of Oregon, which are in part covered with timber;

Now, therefore, I, THEODORE ROOSEVELT, President of the United States of America, by virtue of the power in me vested by the Act of Congress, approved June fourth, eighteen hundred and ninety-seven, entitled, "An Act Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-eight, and for other purposes," do proclaim that the aforesaid Cascade Forest Reserve is hereby further enlarged to include the said additional lands, and that the boundaries of the reserve are now as shown on the diagram forming a part hereof;

Excepting from the force and effect of this proclamation all lands which are at this date embraced in any legal entry or covered by any lawful filing or selection duly of record in the proper United States Land Office, or upon which any valid settlement has been made pursuant to law, and the statutory period within which to make entry or filing of record has not expired; and also excepting all lands which at this date are embraced within any withdrawal or reservation for any use or purpose to which this reservation for forest uses is inconsistent: Provided, that these exceptions shall not continue to apply to any particular tract of land unless the entryman, settler, or claimant continues to comply with the law under which the entry, filing, or settlement was made, or, unless the reservation or withdrawal to which this reservation is inconsistent continues in force; not excepting from the force and effect of this proclamation, however, any land within the boundary herein described, which has been withdrawn to protect the coal therein but this proclamation does not vacate any such coal land withdrawal; and provided that these exceptions shall not apply to any land embraced in any selection, entry or filing, which has been allowed or permitted to remain of record subject to the creation of a permanent reservation.

Warning is hereby given to all persons not to make settlement upon the lands reserved by this proclamation.

In Witness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington this 2d day of March, in the year of our Lord one thousand nine hundred and seven, and of the Independence of the United States the one hundred and thirty-first.

THEODORE ROOSEVELT

By the President:
ELIHU ROOT
Secretary of State.

CASCADE FOREST RESERVE

OREGON

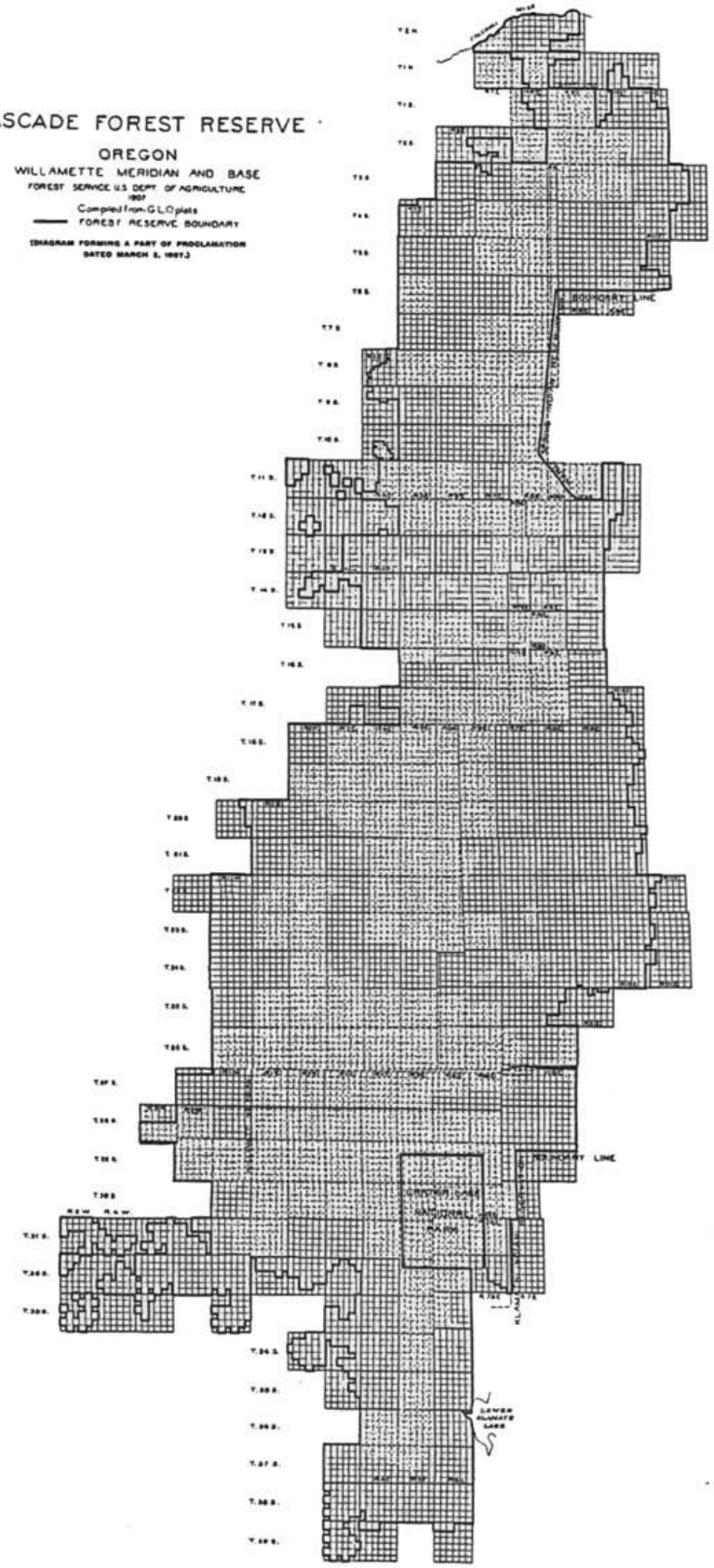
WILLAMETTE MERIDIAN AND BASE

FOREST SERVICE U.S. DEPT. OF AGRICULTURE
1907

Compiled from G.L.O. plats

FOREST RESERVE BOUNDARY

DIAGRAM FORMING A PART OF PROCLAMATION
DATED MARCH 2, 1907.)



CASCADE NATIONAL FOREST
OREGON
(FIFTH PROCLAMATION.)

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

WHEREAS an Executive Order dated June thirtieth, nineteen hundred and eight, directed that a part of the Cascade National Forest, in the State of Oregon, should be known as the Cascade National Forest; and

WHEREAS it appears that portions of the Cascade National Forest should be included in the Santiam National Forest and the Paulina National Forest; and

WHEREAS it appears that a portion of the Umpqua National Forest should be transferred to the Cascade National Forest;

Now, therefore, I, WILLIAM H. TAFT, President of the United States of America, by virtue of the power in me vested by the Act of Congress approved June fourth, eighteen hundred and ninety-seven, entitled "An Act Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-eight, and for other purposes," do proclaim that on and after July first, nineteen hundred and eleven, the boundaries of the Cascade National Forest shall be as shown on the diagram forming a part hereof.

This proclamation shall not prevent the settlement and entry of any lands heretofore opened to settlement and entry under the Act of Congress approved June eleventh, nineteen hundred and six, entitled "An Act To provide for the entry of Agricultural lands within forest reserves".???

It is not intended by this proclamation to release any land from reservation nor to reserve any land not heretofore embraced in a National Forest.

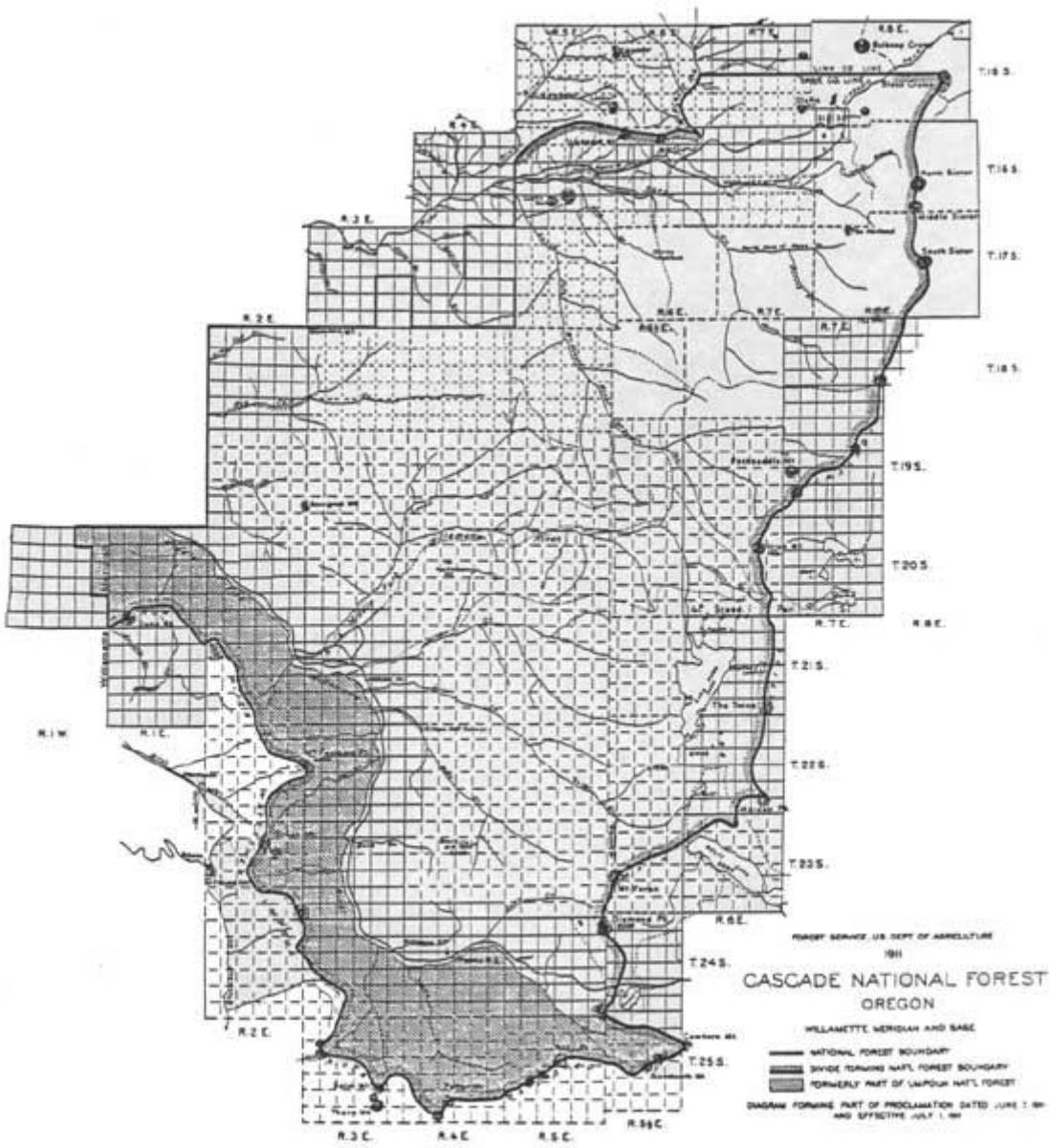
In Witness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington this seventh day of June, in the year of our Lord one thousand nine hundred and eleven, and of the Independence of the United States the one hundred and thirty-fifth.

WM H TAFT

By the President:
P. C. KNOX
Secretary of State.

[No. 1130.]



SANTIAM NATIONAL FOREST
OREGON

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

WHEREAS it appears that portions of the Oregon and the Cascade National Forests, within the State of Oregon, should constitute the Santiam National Forest;

Now, therefore, I, WILLIAM H. TAFT, President of the United States of America, by virtue of the power in me vested by the Act of Congress approved June fourth, eighteen hundred and ninety-seven, entitled "An Act Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-eight, and for other purposes," do proclaim that on and after July first, nineteen hundred and eleven, the boundaries of the Santiam National Forest shall be as shown on the diagram forming a part hereof.

This proclamation shall not prevent the settlement and entry of any lands heretofore opened to settlement and entry under the Act of Congress approved June eleventh, nineteen hundred and six, entitled "An Act To provide for the entry of Agricultural lands within forest reserves".???

It is not intended by this proclamation to reserve any land not heretofore embraced in a National Forest, nor to release any land from reservation.

No public land is included in Section twenty-four (24), Township eleven (11) South, Range three (3) East, Willamette Meridian, Oregon, which is eliminated from the Oregon National Forest by a proclamation effective July first, nineteen hundred and eleven, changing the boundaries of said Forest.

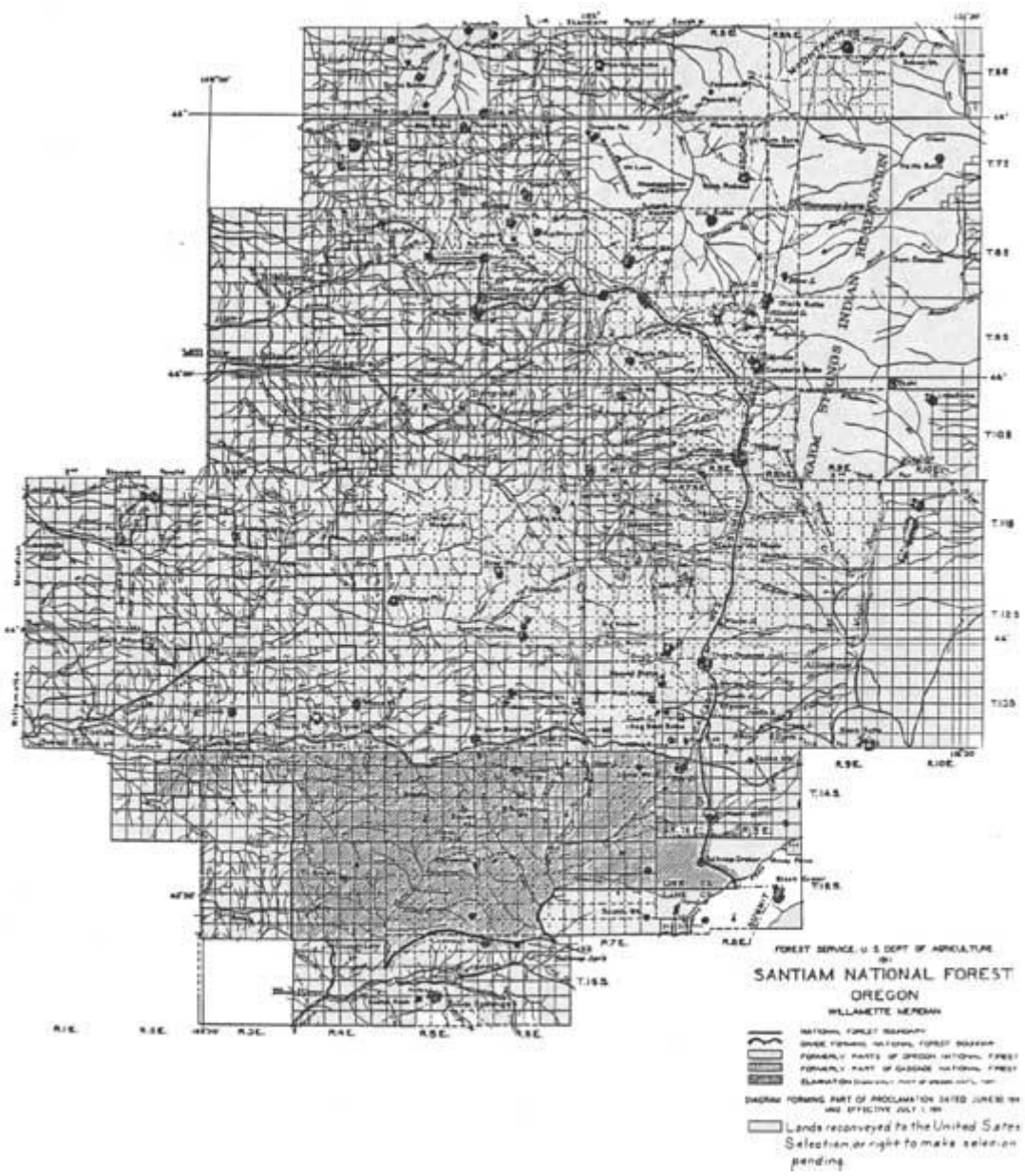
In Witness Whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

[SEAL.] DONE at the City of Washington this thirtieth day of June, in the year of our Lord one thousand nine hundred and eleven, and of the Independence of the United States the one hundred and thirty-fifth.

WM H TAFT

By the President:
HUNTINGTON WILSON
Acting Secretary of State.

[No. 1163.]



EXECUTIVE ORDER

TRANSFER OF LANDS FROM THE CASCADE AND SANTIAM NATIONAL FORESTS TO THE WILLAMETTE NATIONAL FOREST OREGON

Under authority of the act of Congress approved June 4, 1897 (30 Stat. 11, 36; U.S.C., title 16, sec. 473), and on the recommendation of the Secretary of Agriculture, it is hereby ordered that the Cascade National Forest as defined by proclamation of June 7, 1911 (37 Stat. 1684—1685), be consolidated with the Santiam National Forest as defined by proclamation of June 30, 1911 (37 Stat. 1712), and amended by act of February 28, 1925 (43 Stat. 1080). The area hitherto comprising the Cascade and Santiam National Forests shall hereafter be known as the Willamette National Forest.

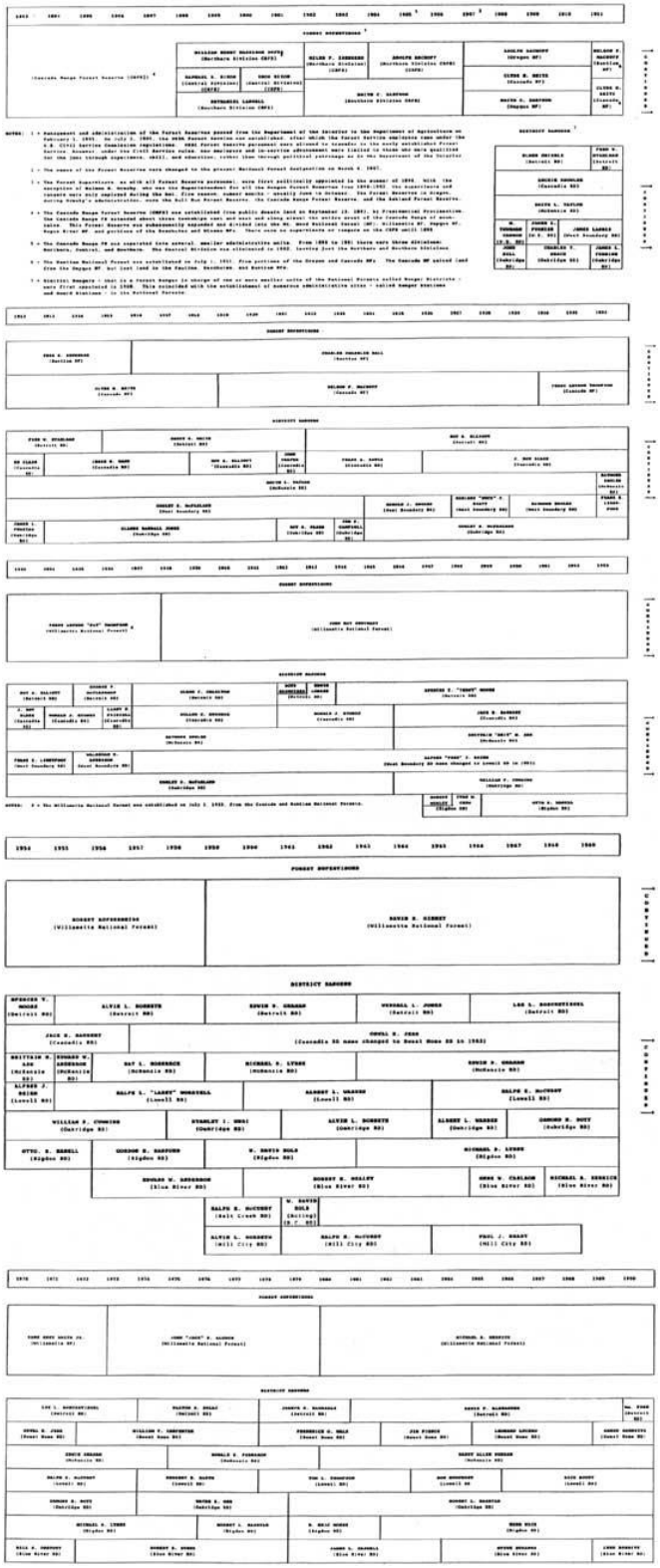
It is not intended by this order to give any publicly owned lands a national-forest status which have hitherto not had such status, nor to remove any publicly owned lands from a national-forest status.

This order is effective July 1, 1933.

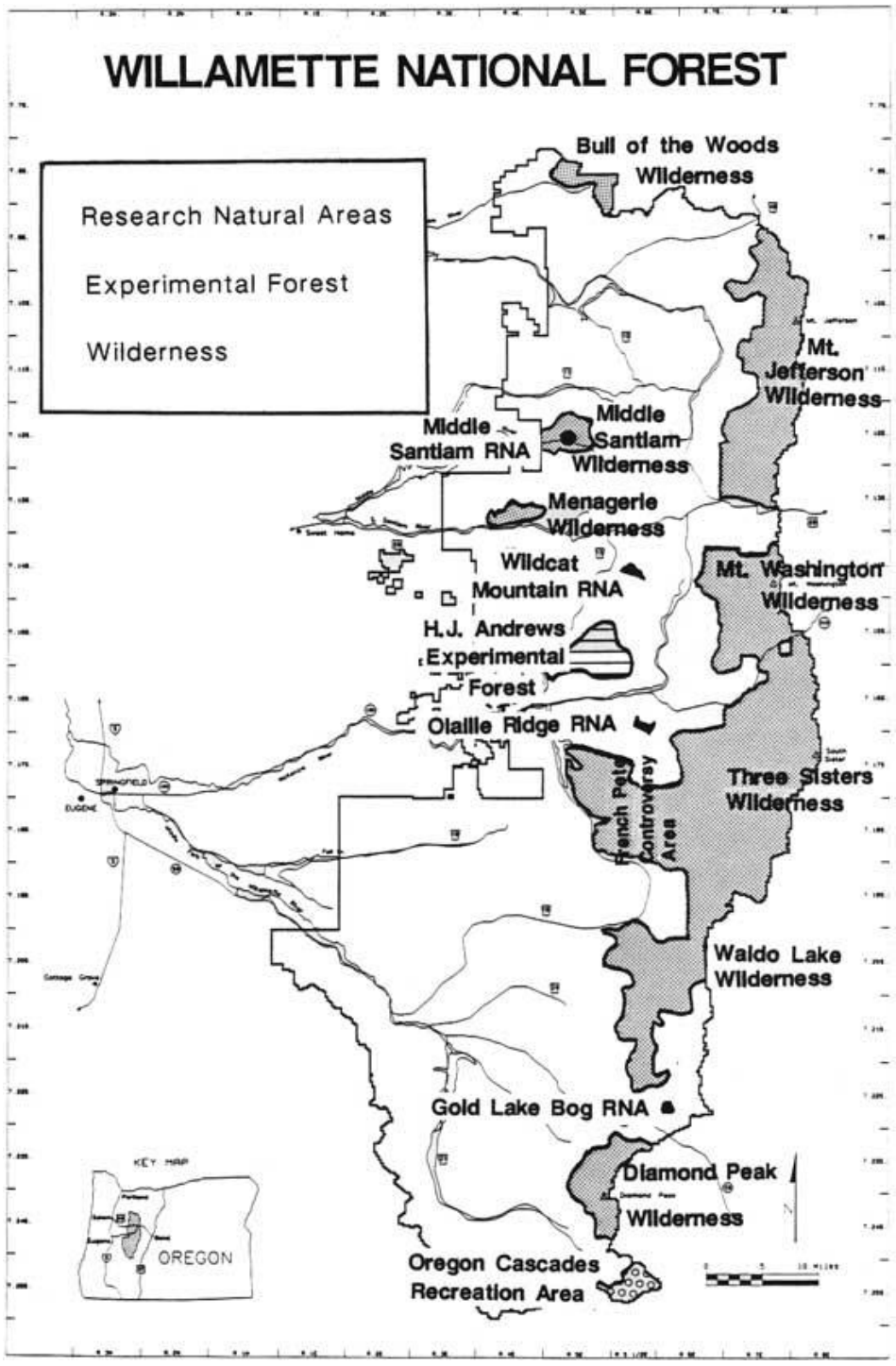
FRANKLIN D ROOSEVELT
THE WHITE HOUSE,
April 6, 1933.

[No. 6104]

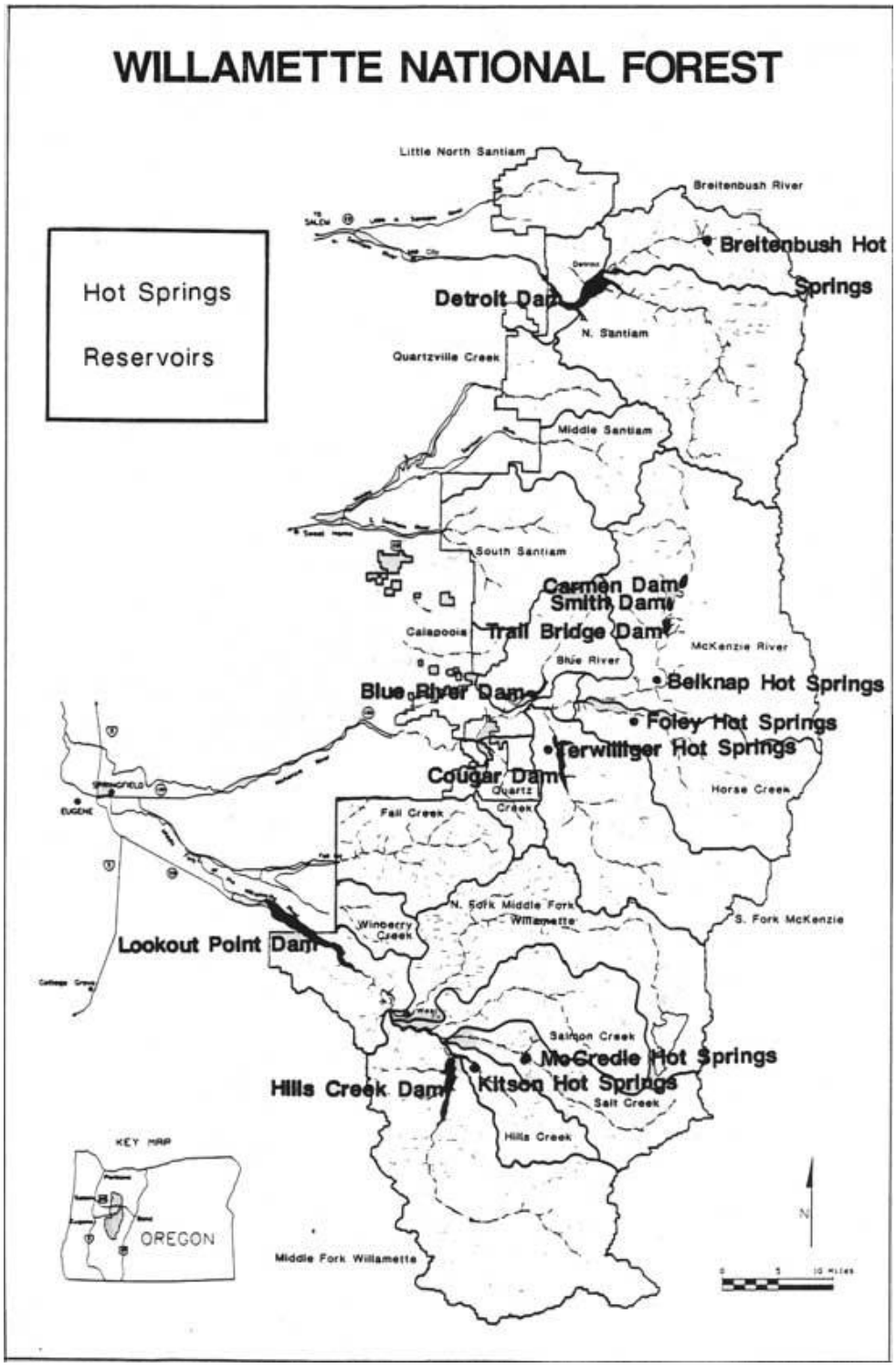
WILLAMETTE NATIONAL FOREST: SUPERVISORS AND DISTRICT RANGERS, 1893-1990



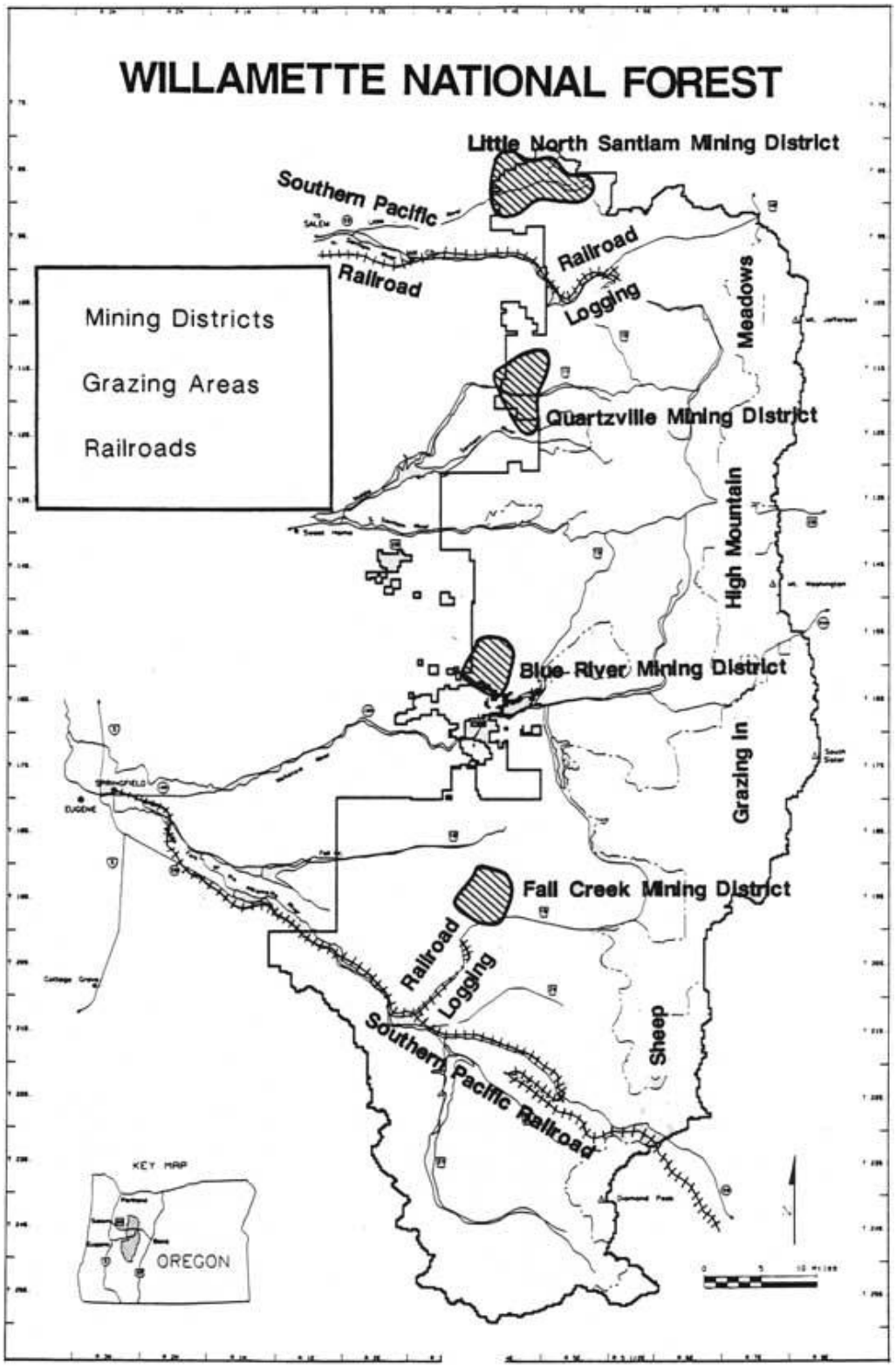
WILLAMETTE NATIONAL FOREST: MAPS



Willamette National Forest—Research Natural Areas, Exerimental Forest, Wilderness.



Willamette National Forest—Hot Springs, Reservoirs.



Willamette National Forest—lMining Districts, Grazing Areas, Railroads.

WILLAMETTE NATIONAL FOREST: FIRE STATISTICS, 1945-1989[1]

Year	Number of Fires	Cause of Fires		Acres Burned	Resource Damage
		Lightning	Human[2]		
1945	83	69	14	N/A	$N/A
1946	148	132	16	N/A	$N/A
1947	37	25	12	N/A	$N/A
1948	20	6	14	N/A	$N/A
1949	111	60	51	1,071	$N/A
1950	44	14	30	455	$N/A
1951	55	16	39	7,452	$N/A
1952	163	122	41	709	$92,958
1953	112	97	15	59	$367
1954	22	0	22	18	$0
1955	96	52	44	287	$122,950
1956	136	99	37	112	$13,500
1957	57	13	44	306	$22,233
1958	137	100	37	1,273	$250,173
1959	66	13	53	186	$25,938
1960	114	58	56	132	$7,275
1961	214	153	61	72	$1,000
1962	103	12	91	179	$895
1963	79	44	35	23	$0
1964	41	4	37	13	$0
1965	130	56	74	198	$19,893
1966	127	57	70	382	$14,363
1967	398	316	82	14,965	$ 1,731,200

1968	124	57	67	58	$9,215
1969	108	16	92	133	$87,578
1970	313	204	109	250	$18,350
1971	188	100	88	434	$79,300
1972	177	61	116	495	$260,700
1973	183	39	144	247	$77,105
1974	203	54	149	160	$355,085
1975	177	83	94	84	$17,122
1976	98	36	62	279	$63,880
1977	241	175	66	49	$1,800
1978	88	52	36	197	$318,180
1979	109	30	79	909	$407,102
1980	102	36	66	189	$600,000
1981	76	13	63	93	$59,290
1982	157	116	41	88	$20,000
1983	72	26	46	2,336	$ 1,800,260
1984	56	27	29	12	$0
1985	142	77	65	326	$140,000
1986	97	53	44	484	$222,225
1987	237	167	70	353	$ 960,044
1988	58	0	58	8,055	$30,148,655
1989	85	55	30	106	$278,378
TOTALS	**5,584** (100.0%)	**2,995** (53.3%)	**2,589** (46.7%)	**43,229**	**$38,227,114**
ANNUAL AVERAGE	126.9	68.1	58.8	982.5	$ 868,798

Notes:

1 = From Annual Fire Reports 1953 through 1989 and Fire Staff.

2 = The human caused category is composed of smoking, campfires, debris burns, railroad (brakeshoes, exhaust spark, or electrical), equipment use (line rub, power saw exhaust, warming fires, etc.), incendiary (arson), children playing with matches, and other causes.

WILLAMETTE NATIONAL FOREST: MAJOR FOREST FIRES SINCE 1893
(Greater than 40 Acres)

Year	Fire Name	Fire Size (Acres)		Ranger District	Cause
		FS Land	Other Land		
1893	Coffin Mountain	5,000		Detroit	Lightning
	Wildcheat	1,000		Detroit	Lightning
1898	Dead (Green) Mtn.	1,500		Oakridge	Hunter
1902	Sardine Mountain	1,000		Detroit	Lightning
1908	Battle Ax	5,000		Detroit	
1910	Dead (Green) Mtn.	16,700		Oakridge	
	Waldo	260		Oakridge	
1911	Seven Mile Hill	3,000		Sweet Home	
1912	Carpenter Mountain	1,000		Blue River	
1914	Anderson	800			
	Breitenbush	2,000		Detroit	Lightning
1917	Oakridge	425		Oakridge	
1918	Duval Creek	520		Lowell	
	Golden Creek	400			
	Little North Fork	400		Detroit	Lightning
	Lookout Mountain	560		Detroit	Lightning
1919	Augusta	1,280		Lowell	Lightning
	Brock	250		Oakridge	Lightning
	Canal Creek	500		Sweet Home	Lightning
	Coffee Pot	600		Rigdon	Lightning
	Death Ball	540		Blue River	Lightning
	Detroit	6,000		Detroit	Lightning

	Horse Lake	640		McKenzie	Lightning
	Jeffries	320		Blue River	Lightning
	Johnson Meadows	420		Rigdon	Lightning
	Portland Creek	6,680		Lowell	Lightning
	Koch	250		Oakridge	Lightning
	Rebel Creek	5,440		Blue River	Lightning
	Salmon Creek	470		Oakridge	Lightning
	Stone Mountain	2,287		Rigdon	Lightning
	Walker Creek	400		Oakridge	Lightning
	Wall Creek	6,720		Blue River	Lightning
1924	Bear Creek	2,400		Rigdon	Lightning
	Canyon Creek	4,721			Lightning
	Diamond Creek	500		Rigdon	Lightning
1925	Sims Ranch	480		McKenzie	
1935	Sims	1,715		McKenzie	
1936	Seven Mile Hill	610		Sweet Home	Lightning
1938	Blue River	200		Blue River	
1940	Blowout	431		Detroit	
	Cabin Creek	225		Detroit	
	Gate Creek	165		Detroit	
1941	Tumble Creek	1,415		Detroit	Lightning
1943	Alpine Trail	135			
1945	Kelsay Ridge	65		Oakridge	Lightning
	Kitson Ridge	55		Oakridge	Lightning
1946	East Fork	99		Blue River	
1949	N. McKenzie	1,050		McKenzie	Debris Burn

	S. McKenzie	1,000		McKenzie	Debris Burn
1950	Halls Ridge	260		Detroit	Debris Burn
	Shroyer	140		Detroit	Debris Burn
1951	He He	2,721		Lowell	Human Caused
	Sardine	4,731		Detroit	Cigarette
1952	Pryor	266		Oakridge	Railroad
1955	Emigrant Butte	160		Rigdon	Lightning
	Paddy's Valley	65		Rigdon	Lightning
1957	Fields-Wicopee	300		Oakridge	Railroad Spark
1958	Canyon Creek	94		Detroit	Lightning
	Dry Creek	1,025		Detroit	Lightning
1959	Rebel Creek	170		Blue River	Campfire
1960	Pryor	96		Oakridge	Human Caused
1967	Airstrip	5,400		McKenzie	Lightning
	Buck Mountain	1,400		Detroit	Lightning
	Captain Prairie	51		Oakridge	Lightning
	Cupola	158		McKenzie	Lightning
	Dead Mountain	2,593		Oakridge	Lightning
	Devils Ridge	423		Detroit	Lightning
	Eagle Rock	1,298		Detroit	Lightning
	Lava Flow	700		McKenzie	Lightning
	Peggy Creek	85		McKenzie	Lightning
	Sinker Ridge	59		Oakridge	Lightning
	Squaw	73		McKenzie	Lightning
1969	Slate Creek	40		Detroit	Human Caused
1970	Logger Butte	59		Rigdon	Logging Equip.

	McCoy	109		Detroit	Car Backfire
	Simpson Crk. Private	50		Rigdon	Debris Burn
1971	Horse Creek	93		McKenzie	Debris Burn
	Lucky	232		Detroit	Debris Burn
	Nordic	102		McKenzie	Debris Burn
1972	Delp Creek	49		Lowell	Human Caused
	North Buck	80		Rigdon	Smoking
	North Buck #2	338		Rigdon	Smoking
1973	Bramble	67		McKenzie	Human Caused
	Parks	183		Sweet Home	Debris Burn
	Tunnel #20	93		Oakridge	Debris Burn
1974	Lookout	65		Lowell	Human Caused
1976	Harter Mountain	80	10	Sweet Home	Debris Burn
	Little Slopover	130		Rigdon	Debris Burn
1978	Black Creek	136		Oakridge	Debris Burn
1979	Alter	324	220	McKenzie	Debris Burn
	Box	120		Detroit	Debris Burn
	Log Creek	46	18	Detroit	Debris Burn
	Pebble	159		McKenzie	Debris Burn
	Swift	60	220	Rigdon	Debris Burn
	Wonderment	90		McKenzie	Debris Burn
1980	Bohemia	140	375	Oakridge	Logging Line
1981	Pryor	72		Oakridge	Railroad
1982	Marine Ridge	40		Lowell	Debris Burn
1983	Bull Gold	75		Sweet Home	Debris Burn
	Deception	790		Lowell	Debris Burn

	Delp Creek	58		Lowell	Debris Burn
	Eagle	335		Detroit	Debris Burn
	Eena Mountain	100		Sweet Home	Debris Burn
	Elk North	308		Sweet Home	Debris Burn
	Elor Holman 2	53		Sweet Home	Debris Burn
	High Leap	234		Oakridge	Debris Burn
	Jumpoff Joe	132		Sweet Home	Debris Burn
	Kafka	68		McKenzie	Debris Burn
	Moose Mountain	78		Sweet Home	Debris Burn
	Ridge	280		Blue River	Debris Burn
	Scar Lake	85		Sweet Home	Debris Burn
	Woodrat	100		Oakridge	Debris Burn
1985	Paddy	40		Rigdon	Debris Burn
	Shady Dell	43		Lowell	Debris Burn
	Wicopee	152		Oakridge	Debris Burn
1986	Packard	65		Rigdon	Logging Equip.
	Rider	50		Blue River	Debris Burn
	Tumble	240		Rigdon	Debris Burn
1987	Boulder	82		Detroit	Incendiary
	Cooper's	83		Detroit	Miscellaneous
	Tunnel	40		Oakridge	Lightning
1988	Pyramid	9,163	880	Rigdon	Smoking

WILLAMETTE NATIONAL FOREST: REFORESTATION STATISTICS, 1913-1989[1]

Year	Acres Seeded	Acres Planted	Trees Planted[2]		Year	Acres Seeded	Acres Planted	Trees Planted
1913	0	8	2,640		1960	519	6,968	2,077,000
1914	0	268	88,000		1961	1,508	3,784	1,248,000
					1962	1,203	7,524	2,832,750
1915	0	810	267,000		1963	1,895	10,964	3,822,000
1916	0	716	236,000		1964	2,872	8,635	3,021,000
1917	0	495	163,000		1965	6,263	7,087	2,338,000
1918	0	489	161,000					
1919	0	400	132,000		1966	3,296	9,702	3,506,000
					1967	5,077	7,689	2,206,000
1920	0	376	124,000		1968	4,297	7,709	2,371,000
1921	0	357	127,000		1969	1,614	6,103	1,925,000
---	-	---	---					
1936	0	388	128,000		1970	858	6,422	1,935,000
1937	0	653	215,000		1971	1,118	8,333	2,580,000
1938	0	998	329,000		1972	0	8,431	2,711,000
1939	0	1,632	538,000		1973	0	13,534	5,414,000
					1974	0	11,031	4,412,000
1940	0	1,165	384,000		1975	0	13,156	5,262,000
1941	0	1,324	436,000					
---	-	---	---		1976	0	13,364	5,626,000
1946	0	94	31,000		1977	0	14,665	7,333,000
1947	0	286	94,000		1978	0	19,265	9,633,000
1948	0	233	76,000		1979	0	16,754	8,377,000

1949	0	352	116,000					
					1980	0	14,823	7,412,000
1950	0	217	71,000		1981	0	12,281	6,141,000
1951	0	1,723	568,000		1982	0	11,012	5,506,000
1952	960	1,909	629,000		1983	0	9,556	4,778,000
1953	244	1,927	635,000		1984	0	8,900	4,450,000
1954	253	1,659	547,000		1985	0	9,053	4,617,000
1955	505	2,513	829,000					
1956	10	2,248	751,000		1986	0	9,412	5,177,000
1957	0	6,289	2,075,000		1987	0	11,229	5,500,000
1958	0	4,412	1,455,000		1988	0	13,006	6,503,000
1959	194	6,423	2,119,000		1989	0	13,799	6,899,000

Total Acres Seeded = 32,686 Average Annual Acres Seeded = 554
Total Acres Planted = 354,555 Average Annual Acres Planted = 6,009
Total Trees Planted = 148,575,701 Average Annual Trees Planted = 2,518,823
Notes:

1 = Annual Reports for the Willamette NF. Data based on fiscal years.

2 = Data for 1913-1962 and 1965 are based on an average of 330 trees planted per acre.

WILLAMETTE NATIONAL FOREST: COMMERCIAL TIMBER SALES, 1909-1989

Year	Forest	Volume in MMBF		Value in Dollars	
		Cut	Sold	Cut	Sold
1909	Cascade[1]	---	0.1	$ ---	$ 106
1910	Cascade	1.9	2.8	$ 4,776	$ 6,600
1911	Cascade	0.5	0.5	$ 727	$ 868
1912	Cascade	(Records Missing)			
	Santiam[2]	(Records Missing)			
1913	Cascade	(Records Missing)			
	Santiam	(Records Missing)			
1914	Cascade	>0.1	>0.1	$ 43	$ 68
	Santiam	1.1	2.9	$ 2.175	$ 5,477
1915	Cascade	1.0	>0.1	$ 3,277	$ 5
	Santiam	1.6	9.1	$ 3,164	$ 12,073
1916	Cascade	10.6	0.2	$ 33,387	$ 164
	Santiam	6.5	1.9	$ 9,286	$ 2,909
1917	Cascade	0.2	0.2	$ 206	$ 207
	Santiam	1.9	1.6	$ 1,052	$ 1,937
1918	Cascade	15.5	---	$ 44,788	$ ---
(1/2 Yr)	Santiam	0.6	>0.1	$ 722	$ 5
1919	Cascade	0.7	0.6	$ 1,429	$ 1,347
	Santiam	2.8	3.5	$ 3,207	$ 4,269
1920	Cascade	0.7	13.9	$ 1,329	$ 24,849
	Santiam	---	69.8	$ 22	$ 125,722
1921	Cascade	1.8	1.3	$ 3,787	$ 5,026
	Santiam	0.7	1.4	$ 2,378	$ 5,013

1922	Cascade	0.9	0.8	$ 3,475	$ 1,062
(1/2 Yr)	Santiam	1.1	>0.1	$ 3,056	$ 53
1923	Cascade	2.7	0.1	$ 6,136	$ 859
	Santiam	19.4	---	$ 19,057	$ ---
1924	Cascade	5.9	689.1	$ 11,359	$ 1,554,902
	Santiam	21.8	7.2	$ 41,623	$ 13,274
1925	Cascade	34.7	25.6	$ 63,810	$ 48,543
	Santiam	16.4	1.0	$ 30,562	$ 1,225
1926	Cascade	20.6	6.5	$ 34,858	$ 11,856
	Santiam	31.8	>0.1	$ 57,340	$ 75
1927	Cascade	29.4	2.8	$ 44,183	$ 5,613
	Santiam	12.0	30.4	$ 20,982	$ 50,805
1928	Cascade	28.5	1.2	$ 45,964	$ 6,621
	Santiam	20.2	5.1	$ 36,623	$ 9,877
1929	Cascade	38.2	0.3	$ 84,451	$ 684
	Santiam	22.2	>0.1	$ 39,918	$ 30
1930	Cascade	40.0	0.2	$ 94,880	$ 1,221
	Santiam	14.1	>0.1	$ 22.667	$ 25
1931	Cascade	31.9	>0.1	$ 76,925	$ 94
	Santiam	10.6	11.6	$ 19,687	$ 15,838
1932	Cascade	11.6	0.8	$ 27,310	$ 564
	Santiam	3.3	>0.1	$ 3,590	$ 26
1933	Cascade[3]	14.1	0.7	$ 31,324	$ 503
	Santiam[3]	>0.1	>0.1	$ 30	$ 26
1934	Willamette[3]	34.5	2.6	$ 69,779	$ 3,800
1935	Willamette	28.7	1.5	$ 67,446	$ 1,034

1936	Willamette	36.3	0.4	$ 105,256	$ 898
1937	Willamette	26.4	0.6	$ 27,831	$ 1,064
1938	Willamette	44.0	68.5	$ 69,414	$ 10,728
1939	Willamette	55.7	142.2	$ 90,665	$ 217,054
1940	Willamette	55.7	6.2	$ 91,124	$ 21,912
1941	Willamette	70.6	43.3	$ 135,900	$ 93,220
1942	Willamette	49.8	25.1	$ 124,706	$ 165,087
1943	Willamette	88.3	190.1	$ 254,373	$ 245,604
1944	Willamette	144.8	134.1	$ 582,455	$ 403,939
1945	Willamette	96.2	166.6	$ 443,893	$ 685,809
1946	Willamette	132.4	63.0	$ 584,298	$ 393,903
1947	Willamette	184.9	302.2	$ 1,101,363	$ 2,493,657
1948	Willamette	206.9	211.3	$ 2,018,875	$ 3,379,091
1949	Willamette	229.1	190.2	$ 2,830,964	$ 1,750,678
1950	Willamette	308.5	226.6	$ 3,152,628	$ 2,804,761
1951	Willamette	281.3	278.8	$ 3,183,870	$ 5,418,131
1952	Willamette	365.0	476.7	$ 7,000,000	$ 8,000,000
1953	Willamette	433.0	276.3	$ 6,583,537	$ 3,638,657
1954	Willamette	402.7	380.3	$ 5,606,787	$ 6,135,832
1955	Willamette	403.7	393.1	$ 6,934,936	$ 13,474,970
1956	Willamette	398.0	390.0	$ 9,527,000	$ 12,497,186
1957	Willamette	373.4	438.1	$ 10,323,000	$ 9,824,890
1958	Willamette	477.2	668.7	$ 10,397,448	$ 12,697,805
1959	Willamette	591.5	733.0	$ 13,026,040	$ 16,443,822
1960	Willamette	476.5	366.7	$ 11,975,001	$ 15,906,103
1961	Willamette	627.2	561.2	$ 15,579,679	$ 14,576,900

1962	Willamette	809.0	720.0	$ 18,573,403	$ 14,131,350
1963	Willamette	670.1	831.6	$ 14,238,634	$ 21,312,057
1964	Willamette	725.4	589.4	$ 16,044,739	$ 20,071,429
1965	Willamette	943.2	666.0	$ 25,954,910	$ 27,804,849
1966	Willamette	714.3	821.7	$ 24,775,842	$ 40,664,140
1967	Willamette	557.7	583.2	$ 19,791,165	$ 24,066,520
1968	Willamette	768.8	762.1	$ 31,399,284	$ 41,013,962
1969	Willamette	806.2	674.8	$ 38,972,247	$ 53,562,648
1970	Willamette	773.6	748.5	$ 33,736,455	$ 36,065,238
1971	Willamette	654.9	718.0	$ 24,599,554	$ 20,794,489
1972	Willamette	866.9	743.0	$ 44,485,481	$ 32,294,277
1973	Willamette	945.1	762.3	$ 47,957,510	$ 66,098,459
1974	Willamette	782.1	759.8	$ 51,017,289	$ 138,275,634
1975	Willamette	542.4	777.2	$ 39,096,946	$ 116,384,211
1976	Willamette	539.2	831.8	$ 50,873,352	$ 133,713,273
1977	Willamette	641.7	756.7	$ 93,087,768	$ 139,737,160
1978	Willamette	693.1	755.3	$ 106,771,225	$ 165,277,727
1979	Willamette	638.7	811.2	$ 110,833,291	$ 252,157,993
1980	Willamette	554.0	788.8	$ 91,698,982	$ 232,992,335
1981	Willamette	470.7	799.8	$ 72,127,142	$ 240,734,315
1982	Willamette	370.3	730.6	$ 38,426,643	$ 76,676,133
1983	Willamette	555.0	731.1	$ 60,135,009	$ 85,439,673
1984	Willamette	609.7	830.7	$ 65,225,124	$ 82,644,399
1985	Willamette	775.3	786.9	$ 77,909,968	$ 65,784,282
1986	Willamette	758.4	853.7	$ 72,395,379	$ 99,609,791
1987	Willamette	899.5	867.5	$ 110,877,662	$ 120,235,831

1988	Willamette	907.7	826.9	$ 140,306,695	$ 157,881,789
1989	Willamette	854.9	355.0*	$ 167,162,785	$ 102,620,824*
TOTALS		26,929.7	28,746.2	$ 1,801,298,357	$ 2,741,432,744
ANNUAL AVERAGE		332.5	354.9	$ 22,238,251	$ 33,844,836

Notes:
1 = Cascade NF was located in the Willamette, McKenzie, and portion of the Santiam River drainages.
2 = Santiam NF established in the North and South Santiam River drainages.
3 = Willamette NF was created in 1933 from the Santiam and Cascade NFs.
* In 1989, because of the Section 318 language, the Willamette National Forest sold 941 MMBF, but awarded only 355 MMBF. Sold values reflect only the awarded timber.

WILLAMETTE NATIONAL FOREST JOB TITLES, GRADES, WOMEN, AND LOCATION OF EMPLOYEES*

(As of March 23, 1988)

GS or WG Series	Job Title	Grade Levels	# of Women	Location		WNF Total
				RDs	SO	
021	Community Planning Technician	5	2	--	2	2
023	Outdoor Recreation Planner	12	--	1	1	2
102	Archaeological Technician	5	1	1	0	1
142	Manpower Development Specialist	11	--	--	1	1
193	Archaeologist	7/9/11	4	9	1	10
201	Personnel Officer	12	--	--	1	1
203	Personnel Clerical & Technical	2/4-5/7/9	10	--	10	10
221	Classification & Wage Specialist	11	1	--	1	1
235	Employment Development Specialist	11	--	--	1	1
303	General Clerical & Administrative	1/2/5/7	10	8	3	11
304	Information Receptionist	3-4	9	8	1	9
305	Mail & File Clerk	2-4	5	2	5	7
313	Recreation Supervisor	6	1	--	1	1
318	Stenography Secretary	7	1	--	1	1
322	Clerk Typist & TRI Assistant	2-3	19	10	10	20
334	Computer Programmer Analyst	7/9/11/12	2	--	6	6
335	Computer Clerk & Assistant	3-7	15	16	5	21
341	Administrative - Officer & Asst.	7/9/13	6	6	2	8
342	Support Services Supervisor	6-8	8	7	1	8
344	Management Assistant	7	2	--	2	2
345	Program Analyst Officer	11-12	1	1	3	4

350	Copier/Duplicate Machine Operator	3	1	--	2	2
393	Community Specialist Supervisory	11	--	--	1	1
401	NEPA Specialist	12	--	--	2	2
404	Biological Techn & Aide - Wildlife	4-5/7/9	3	8	1	9
408	Ecologist	11-12	1	--	2	2
460	Forester	7/9/11-15	17	73	14	87
462	Forestry Technician	1/3-9/11-12	74	274	9	283
470	Soil Scientist	9/11-13	--	2	2	4
482	Fish Biologist	12	--	--	1	1
486	Wildlife Biologist	9/11	2	6	1	7
499	Forestry Student Trainee	4	2	4	1	5
503	Collection Tech/Financial Asst.	5-6	6	6	1	7
525	Accounting Clerk & Technician	3-5/7	3	1	3	4
540	Voucher Examiner	4-5/7	5	1	4	5
544	Payroll Clerk typing	4-5	2	--	2	2
561	Budget Assistant	5-7	2	2	1	3
590	Time & Leave Clerk	4	4	5	--	5
802	Civil/Materials Engineer Tech/Aide	2/4-9/11	14	63	9	72
807	Landscape Architect	5/11-12	1	--	4	4
810	Civil/Structural Engineer	9/11-13	8	13	20	33
817	Surveying Technician	7	--	1	--	1
856	Electronics Technician	7/9	--	1	1	2
899	Civil Engineering Student Trainee	4	1	--	2	2
963	Applications Engineer	5-6	2	--	2	2
1001	Public Affairs Spec/Info. Assist.	5-6	2	1	1	2

1035	Public Affairs Officer/Specialist	9/12	1	--	2	2
1082	Editor	7	--	1	--	1
1087	Editorial Clerk Typist	4-5	5	1	4	5
1101	Timber Sale Supervisor/Clerk/Asst.	3-7/9	14	9	8	17
1102	Contracting and Procurement	9/11-12	2	--	4	4
1105	Purchasing Agent	4-5	11	5	6	11
1106	Procurement Clerk	4-5	2	1	3	4
1315	Hydrologist	11	--	3	--	3
1316	Hydrologic Technician	5/7	1	4	--	4
1350	Geologist	9/11	2	4	4	8
1371	Cartographic Technician & Aide	5/7	1	--	3	3
1373	Land Surveyor	11	--	1	1	2
1811	Criminal investigator	9/12	1	--	2	2
2005	Supply Clerk	5	--	--	1	1
2150	Fleet & Equipment Specialist	11	--	--	1	1
2805	Electrician	10	--	--	1	1
3502	Laborer	3	4	13	--	13
4607	Carpenter	7/9	--	4	--	4
4749	Maintenance Worker	6-7	--	4	--	4
5703	Motor Vehicle Operator	7-8	1	7	--	7
5716	Engineer Equipment Operator	8-10	2	20	--	20
5729	Drill Rig Operator/Helper	5/11	--	--	3	3
5801	Mobile Equipment Repair Inspector	11	--	--	1	1
5806	Mobile Equipment Service Inspector	6	--	1	--	1
5823	Auto Mechanic	10	--	1	--	1

6904	Tool & Parts Attendant	3	--	1	--	1
6907	Warehouse Worker	5/9	--	2	--	2
8610	Small Engine Mechanic	8	--	2	--	2
	TOTAL FOREST EMPLOYEES (as of 3/23/88)**		292	613	188	801
	PERCENT IN EACH COLUMN		36.5	76.5	23.5	100.0

* Comprised of permanent, part-time, and temporary employees. The job title may, in many instances, be slightly different from the actual job duties. In addition, a number of Ranger District employees are often assigned for extended periods of time to the Supervisor's Office. Does not include employees shared with other National Forests.

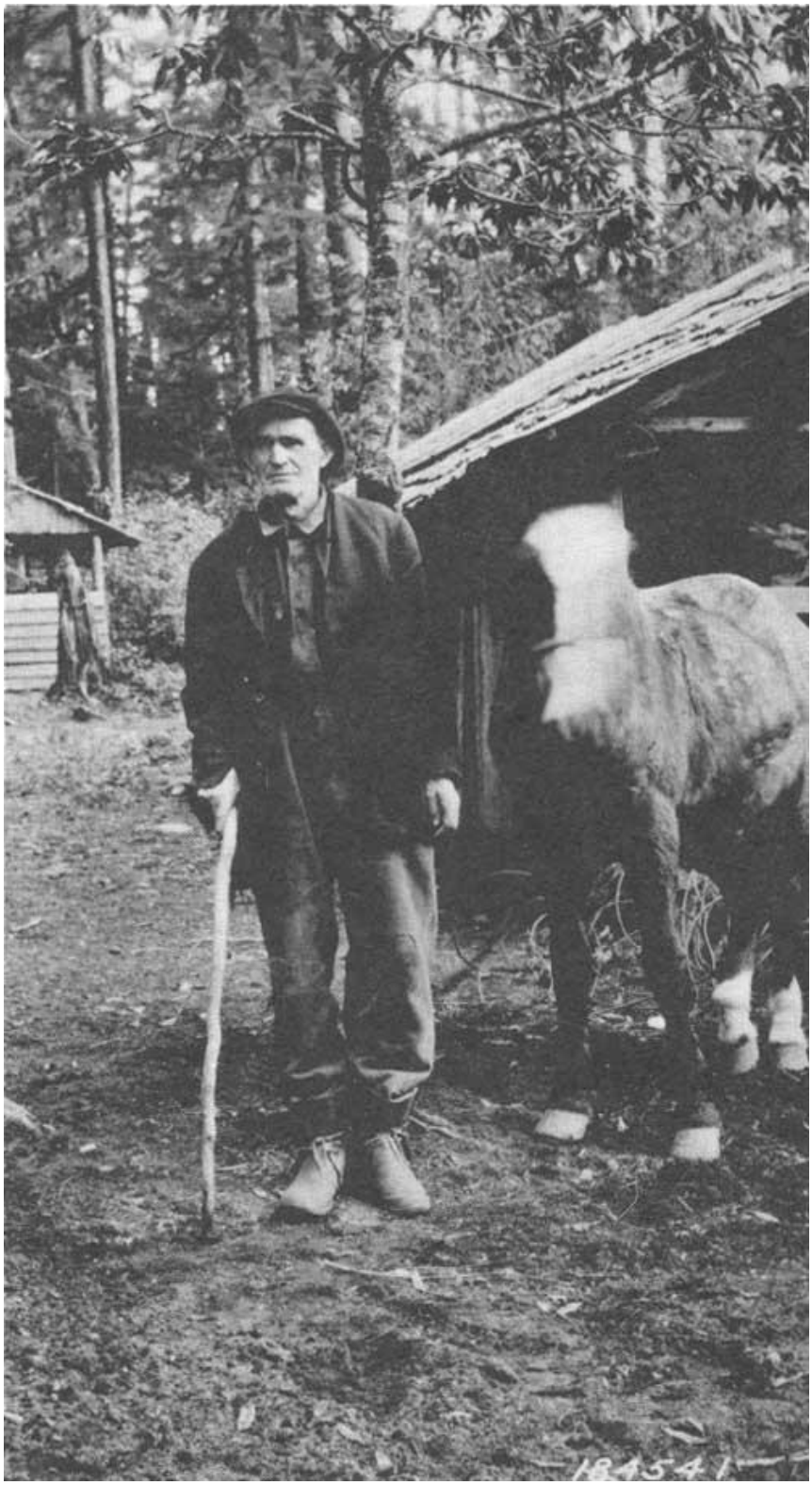
** The total Willamette National Forest employees contains 129 (16.1%) persons that are less than full-time. Of the less-than-full-time group, 24 are part-time, 82 are WAE (When Actually Employed - usually 51 weeks a year), and 23 intermittent working employees (call when needed).

PHOTOS

Gifford Pinchot (Chief of the Forest Service 1905-1910)

Big Prairie Ranger Station with Addie Morris, GLO forest ranger, and his family, c. 1899.

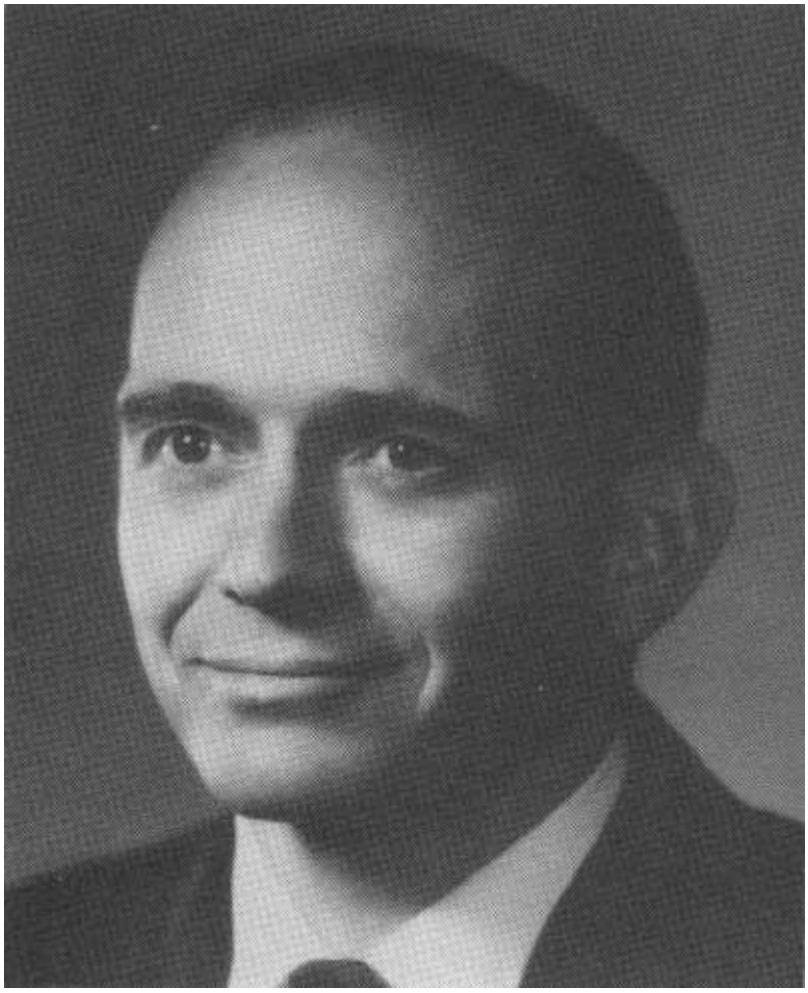
Forest Ranger "Cy" Bingham wearing sheepskin chaps, c. 1910.



GLO Ranger J.A.W. "Bill" Heideike who was later implicated in the land fraud trials. Photographed at Breitenbush Hot Springs, 1923.

Michael Kerrick (Forest Supervisor 1980-present)

John E. Alcock (Forest Supervisor 1974-1980)



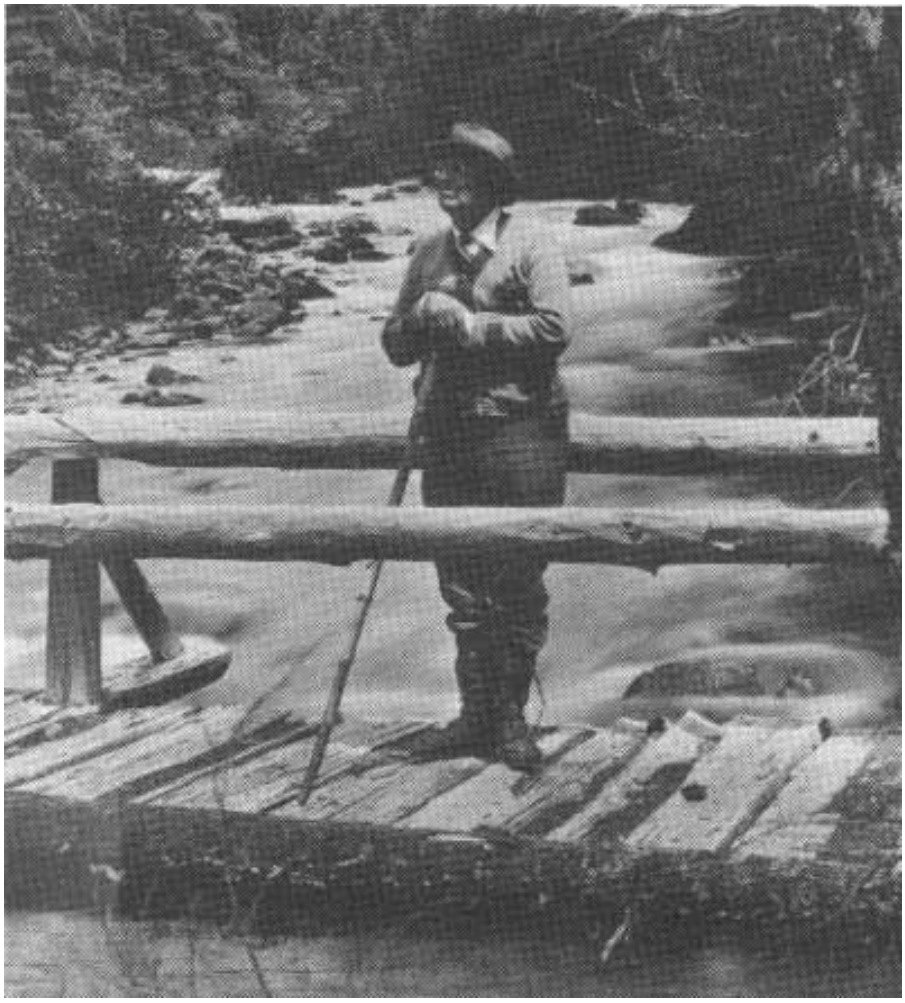
Zane G. Smith, Jr. (Forest Supervisor 1970-1974)

David R. Gibney (Forest Supervisor 1959-1970)

Robert Aufderheide (Forest Supervisor 1954-1959)

John Ray Bruckart (Forest Supervisor 1938-1954)

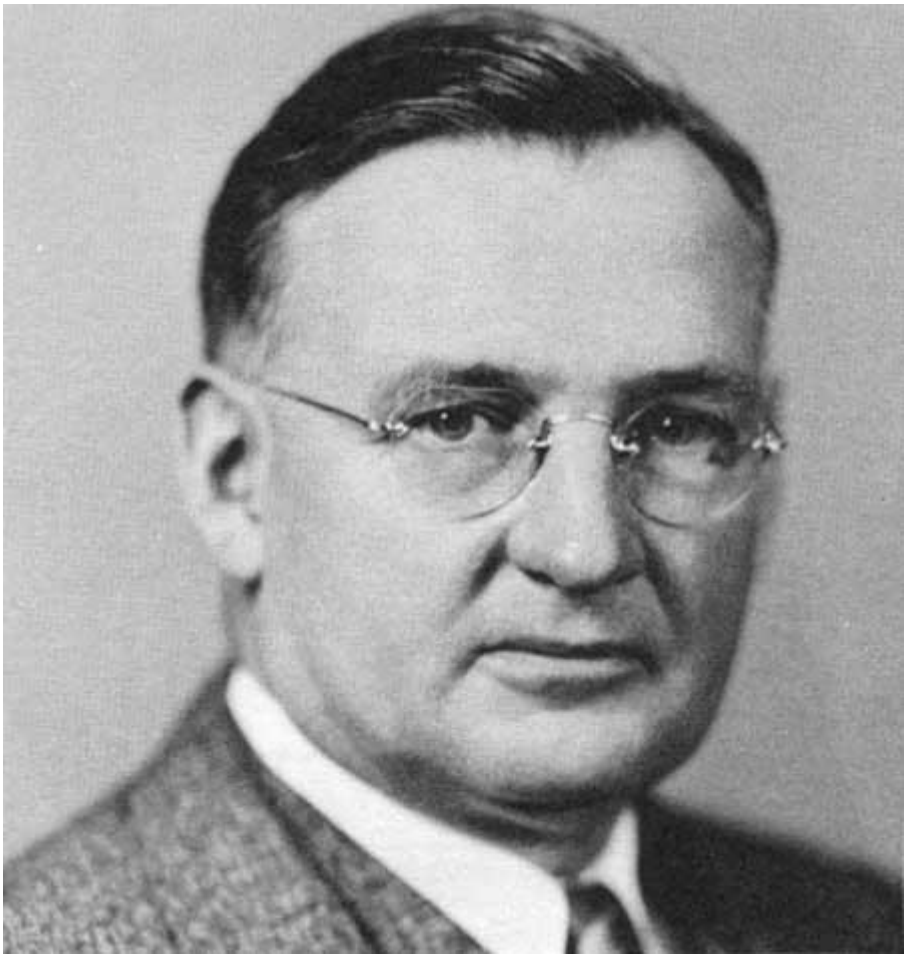
Perry A. ("Pat") Thompson (Forest Supervisor 1930-1938)



Charles C. (C.C.) Hall (Forest Supervisor of the Santiam National Forest 1916-1933)

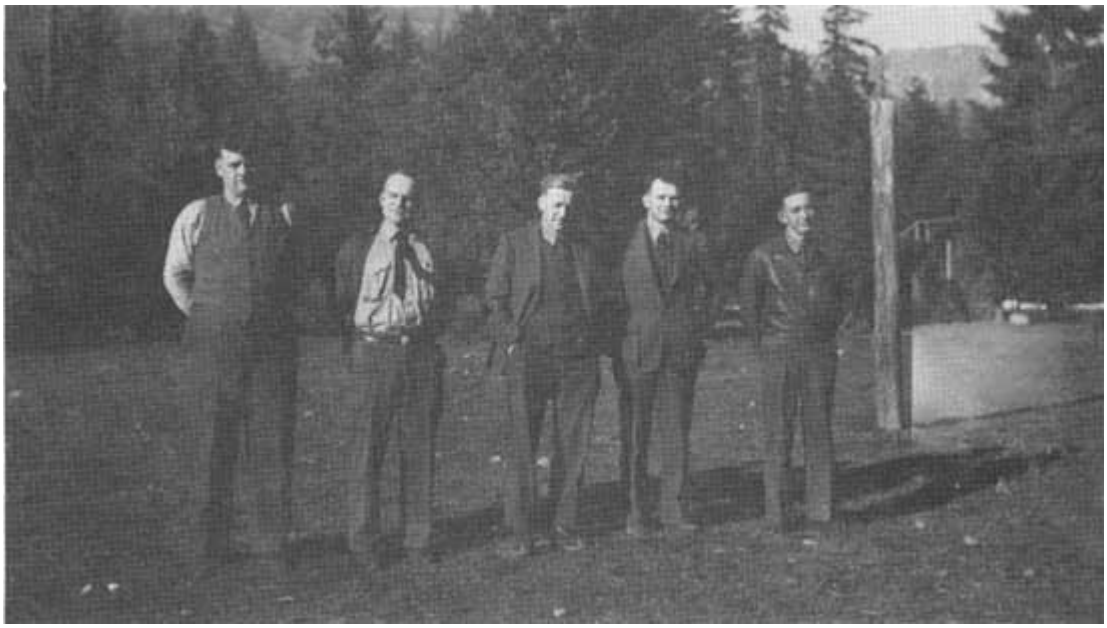
Obsidian party on June 28, 1931 - atop Macduff Mountain in rememberance of Forest Supervisor Nelson F. Macduff

Nelson F. Macduff (Forest Supervisor Cascade NF 1920-1930, Santiam NF 1911-1912)



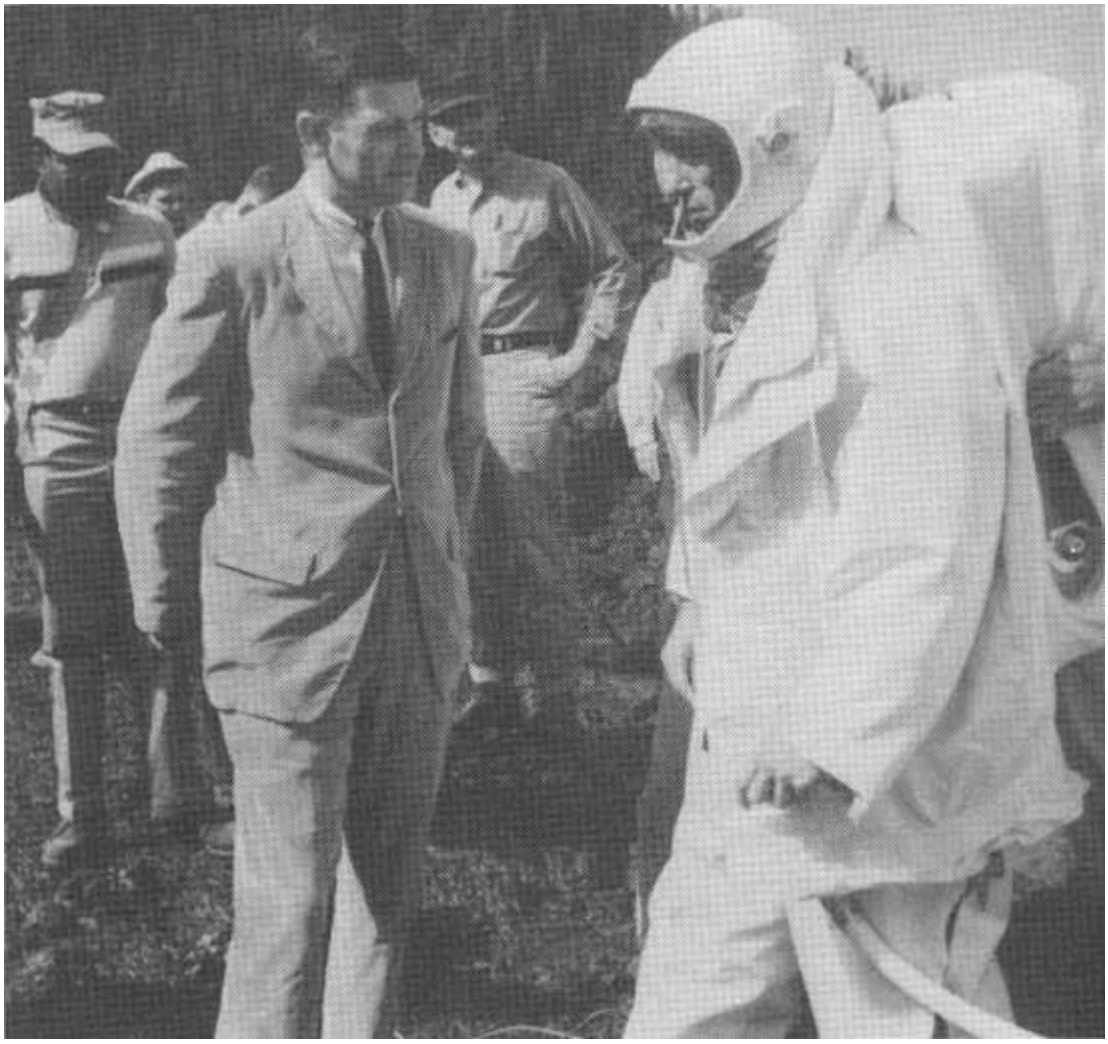
H.J. Andrews (Regional Forester - Pacific Northwest Region 1948-1953)

Willamette National Forest Rangersa Meeting on March 16, 1945 (Front/Rear): McPherson, Neff, White, Bruckart, Engles, Briem, and McFarland. Elliott, Iler, Williams, Hildman, Cummins, Lord, Benecke, Crum, Stoner, Moore.



District Rangers - C.B. McFarland, R.C. Burgess, Ray Engles, Fred Briem, and Joe Elliot, c. 1940.

Field Trip with Forestry Subcommittee of the Congressional Committee on Agriculture. Left to right: Forest Supervisor Dave Gibney (holding map), Congressmen Short (ND), McIntyre (ME), and Grant (AL), 1961.



Oregon Governor Mark O. Hatfield and Astronaut Walter Cunningham visit during a pause in the testing on the McKenzie Pass lava beds, 1964.

Hinton's sheep just north of Wickiup Plains near the South Sister, 1916.

McGreer's sheep (yearling ewes) grazing on Tombstone Prairie, 1927.

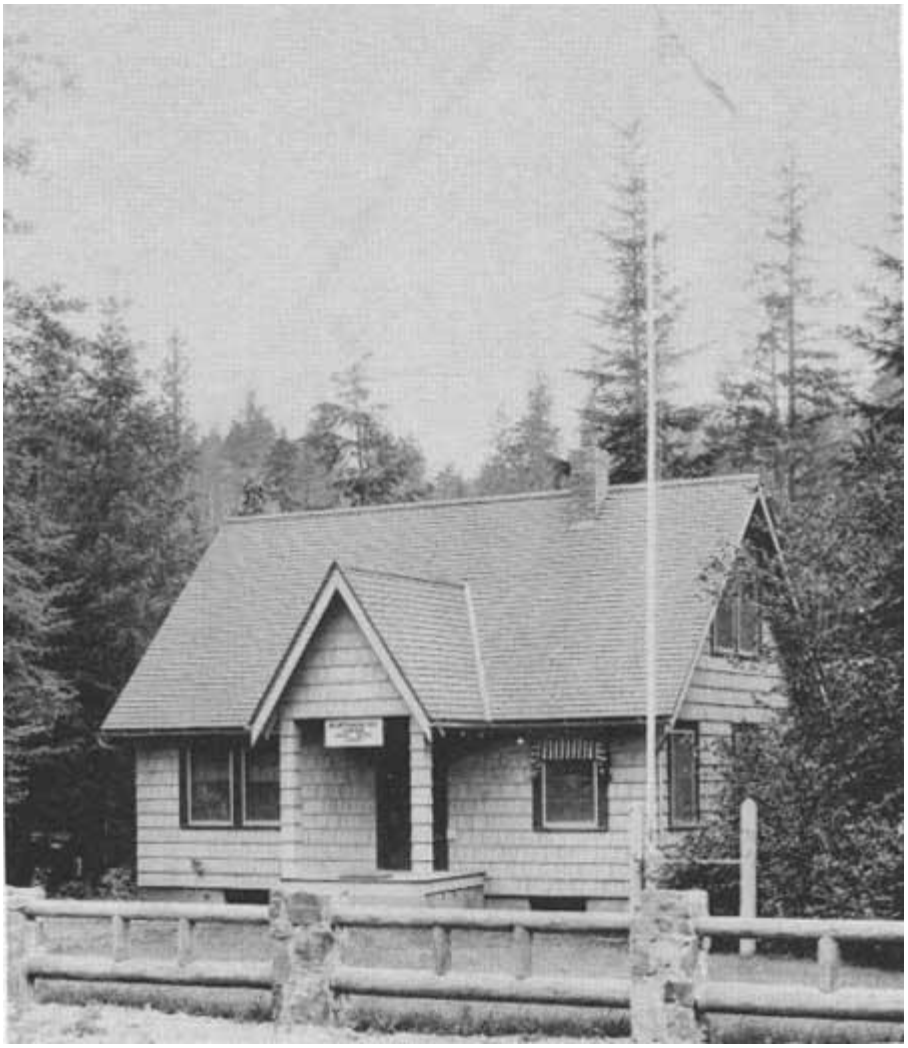
Isaac Hamner's homestead ranch along Hills Creek, 1901.

Rigdon Ranch on the Oregon Central Military Wagon Road, 1890.

Ranger Smith Taylor at Horsepature Saddle, 1930.

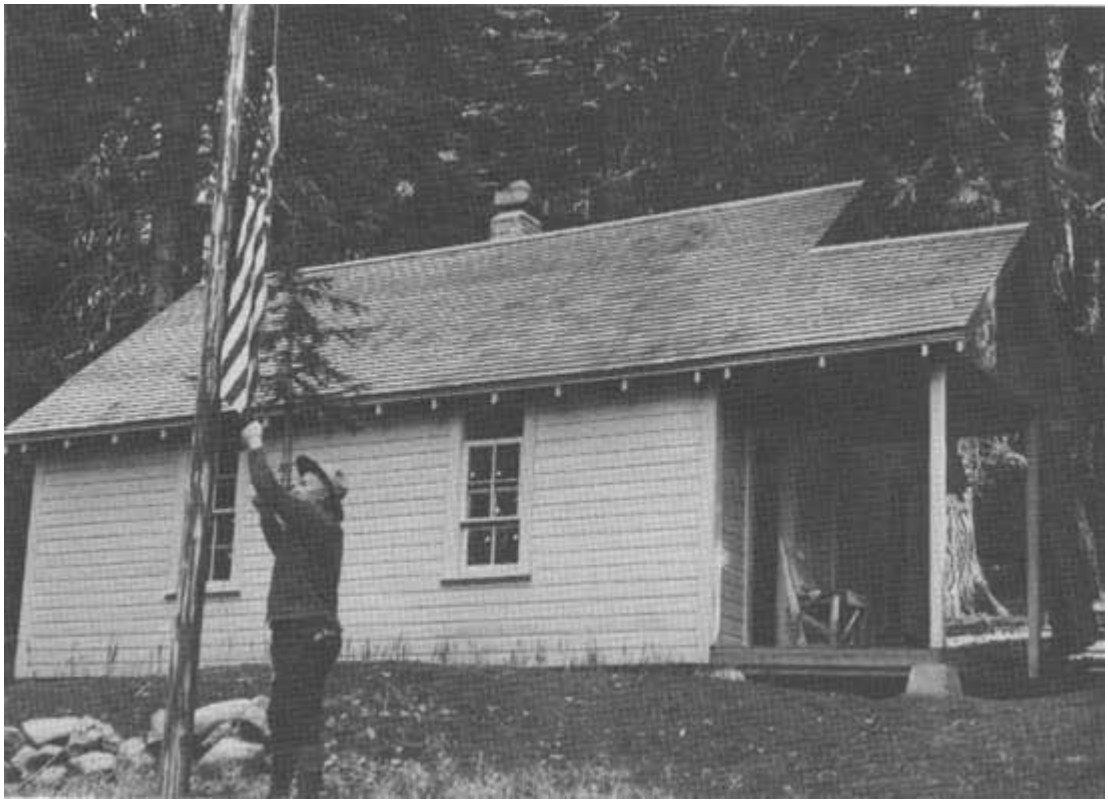
Ranger Roy Elliott on trail inspection near Mt. Jefferson, 1925.

Horse Lake Guard Station with Ray Engles and Ralph Heath (Forest Guard), 1939.



Cascadia Ranger Station, 1936.

Pamella Guard Station Lake, 1929.



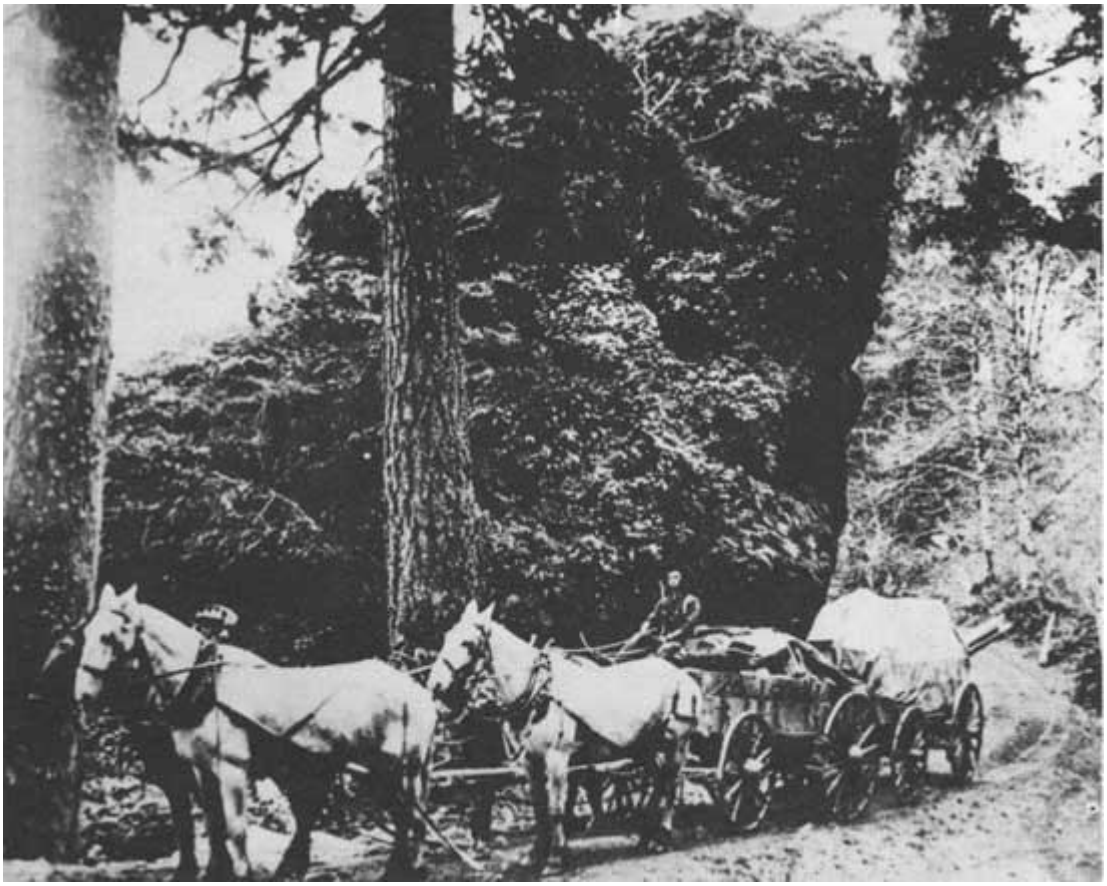
Raising the flag (Smith Taylor) at Olallie Guard Station, 1934.

Oakridge Ranger Station, 1924.

Santiam National Forest field headquarters at Fish Lake, 1925.

Detroit Ranger Station, c. 1915.

West Boundary Ranger Station, 1936.



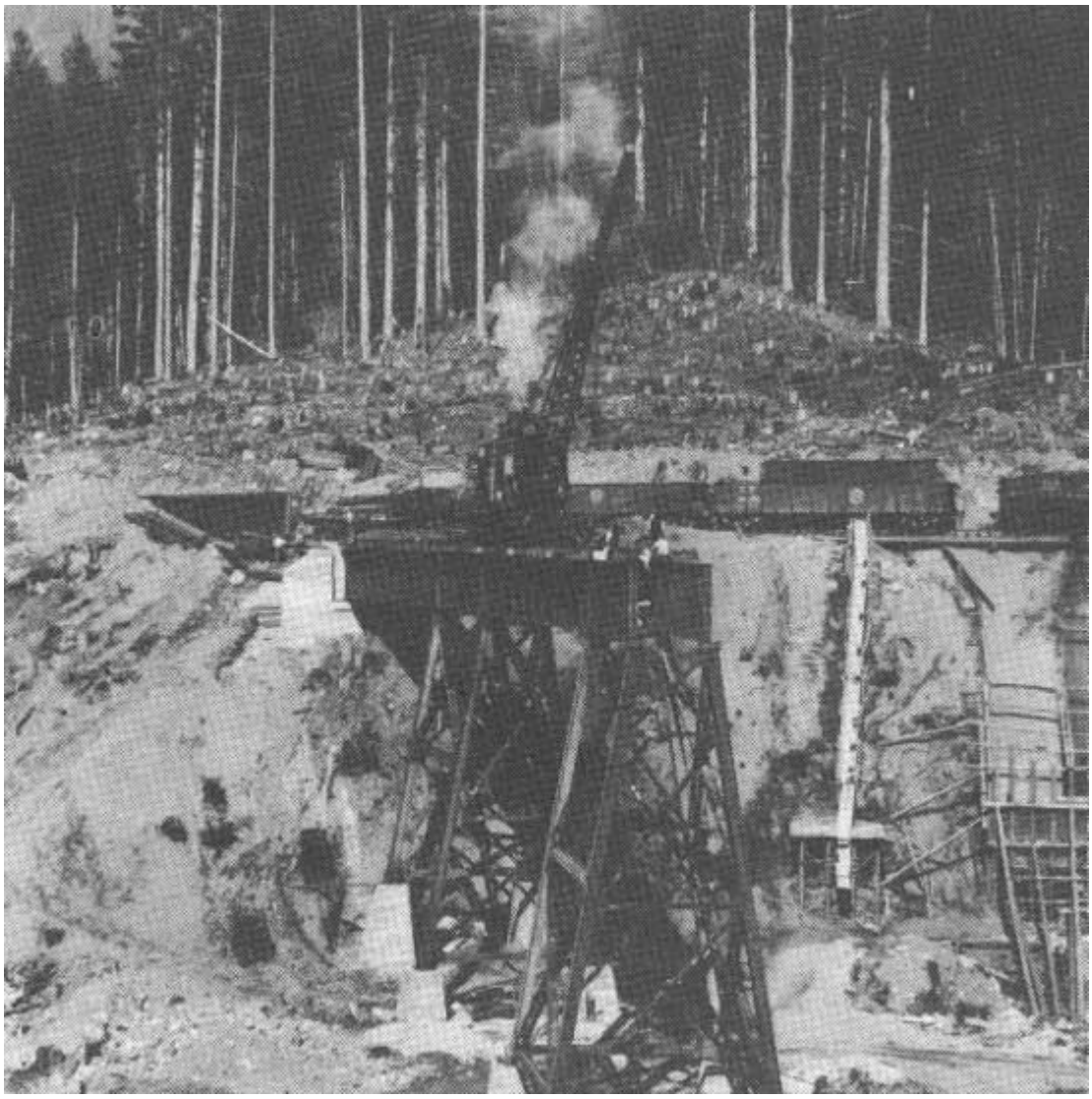
Frank Moore, freighter, at Finn Rock. Note the bells above the horse collar which gave notice that a freight team was coming around the bend, c. 1910.

First auto to cross the Cascade Range. 1904 Oldsmobile "Old Scout" with driver Dwight Huss drove over the Santiam Wagon (Toll) Road in June 1905. It took 44 days from New York to Portland for the opening of the Lewis and Clark Exposition. Photographed in Prineville, 1905.

McKenzie River Highway above Blue River (note the log guard rails), 1920.

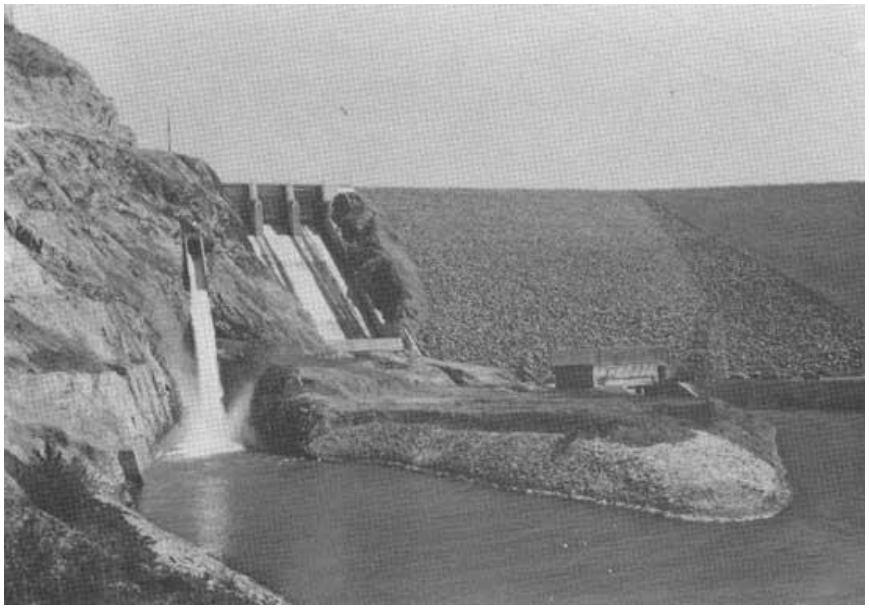
McKenzie Highway near Frog Camp with Three Sisters in background, 1930.

Clearing the railroad right-of-way near the summit of the Cascade Range. Natron cut-off, Southern Pacific RR, 1925.

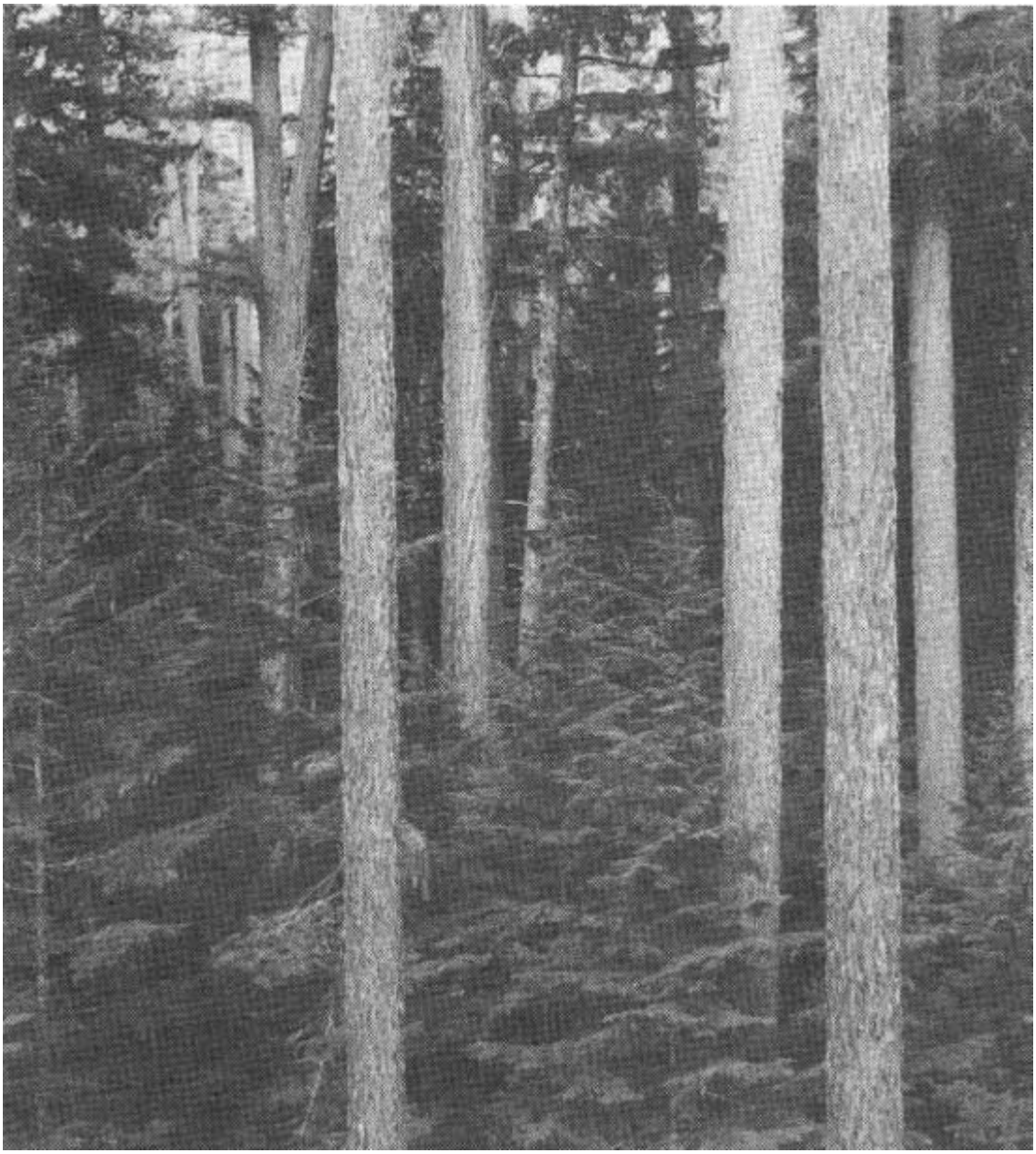


Salt Creek Railroad Bridge, under construction, 1926.

Upper splash dam on North Fort Willamette River, Western Lumber Co. 1924.



Hills Creek Dam, 1964.



Old growth Douglas-fir with hemlock understory along South Santiam Highway near Sheep Creek. Elevation about 3,300 feet. 1944.

Snag falling with a gasoline driven power saw on the Tumble Creek Fire near Detroit, 1941.

Bill Fletcher of Dexter cuts on old-growth western red cedar on a small timber sale on the Lowell Ranger Distict, 1962.

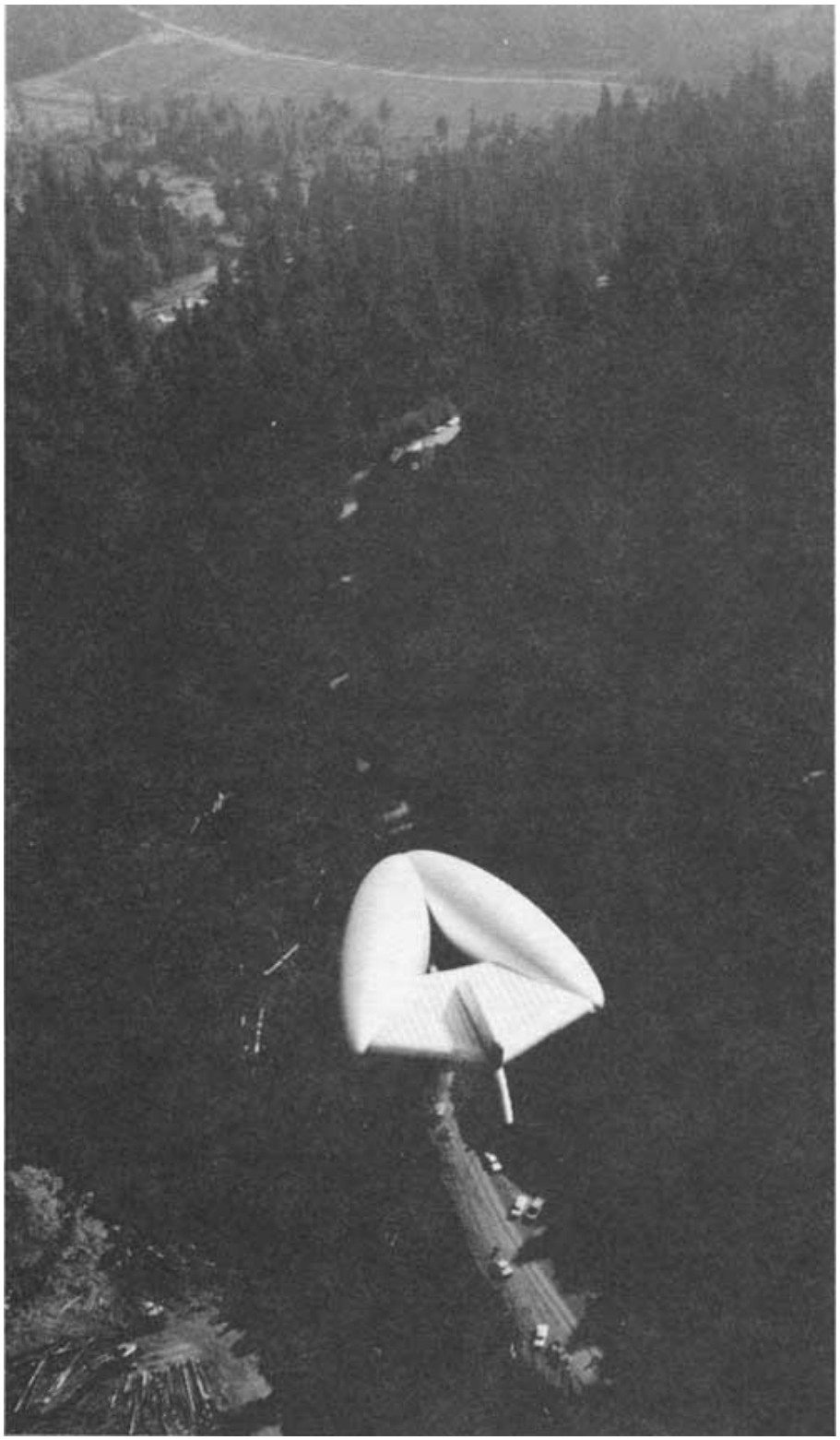
Freshly fallen tree to be cut into logs and skidded to railroad bed, c. 1903.

Logging scene at Westfir, Oregon, 1925. Southern Pacific Co. Photo.

Loading Douglas-fir logs onto logging truck in Box Canyon, 1957.

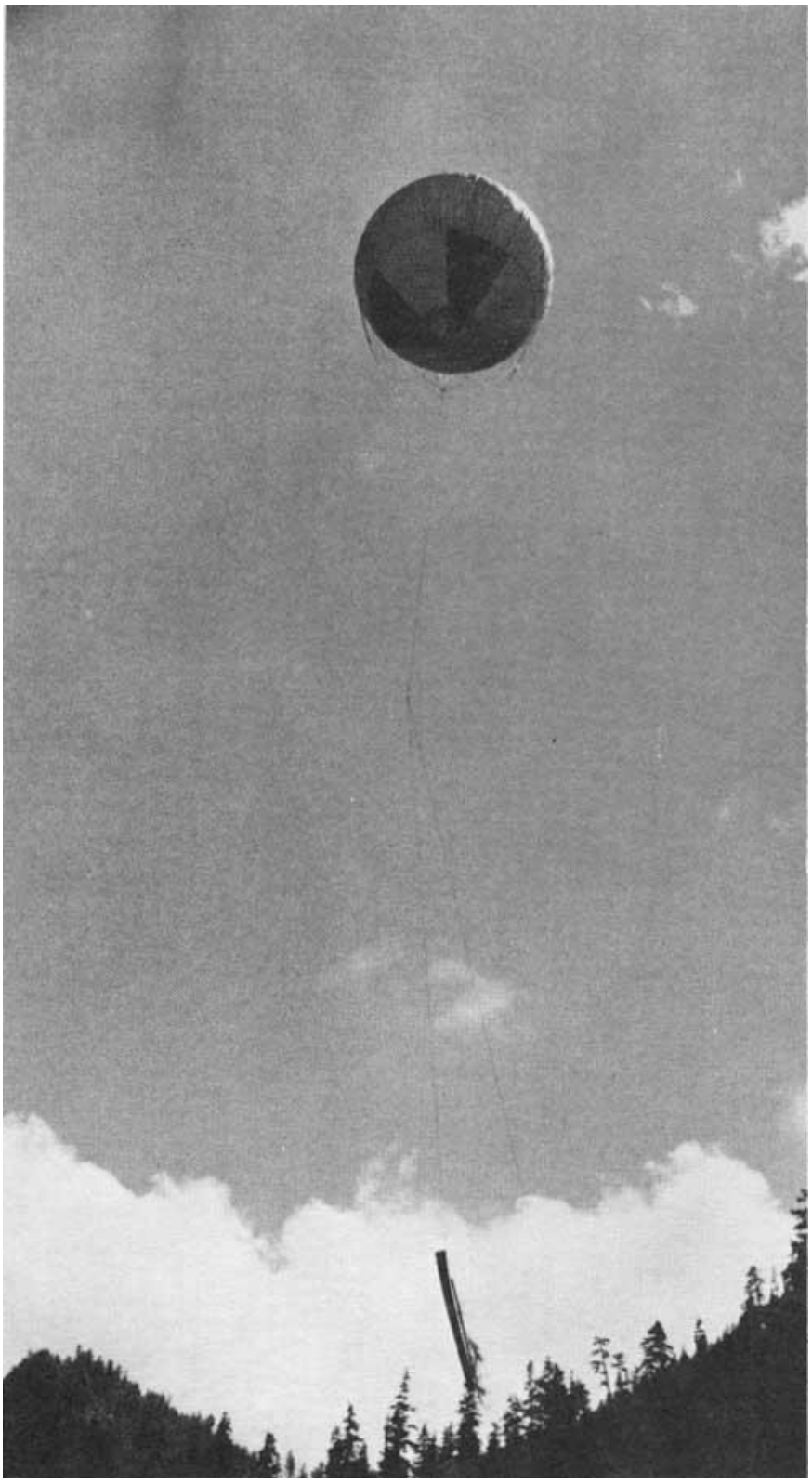
Filling a logging balloon at a landing, c. 1977.

Cat yarding logs top a landing above Cougar Reservoir, 1957.



Aerial photo of a Goodyear Aerospace Vee-Balloon, over Deception Creek, Lowell Ranger District, 1966.

First helicopter logging operation on the Willamette National Forest. Sikorsky S-64E at the Rotor Timber Sale, McKenzie Ranger District, 1973.



Balloon logging operation on the Rigdon Ranger District, 1977.

Wyssen Skyline Crane - logs being lifted to the carriage in the H.J. Andrews Experimental Forest, c. 1970.

Moving a donkey on incline rails in the North Fork Willamette sale area, 1930.

Forest Service scaler Farrier measuring load at the Fall Creek scaling station, 1945.

Breitenbush tree planting camp. Mt. Jefferson in the distance, 1921.

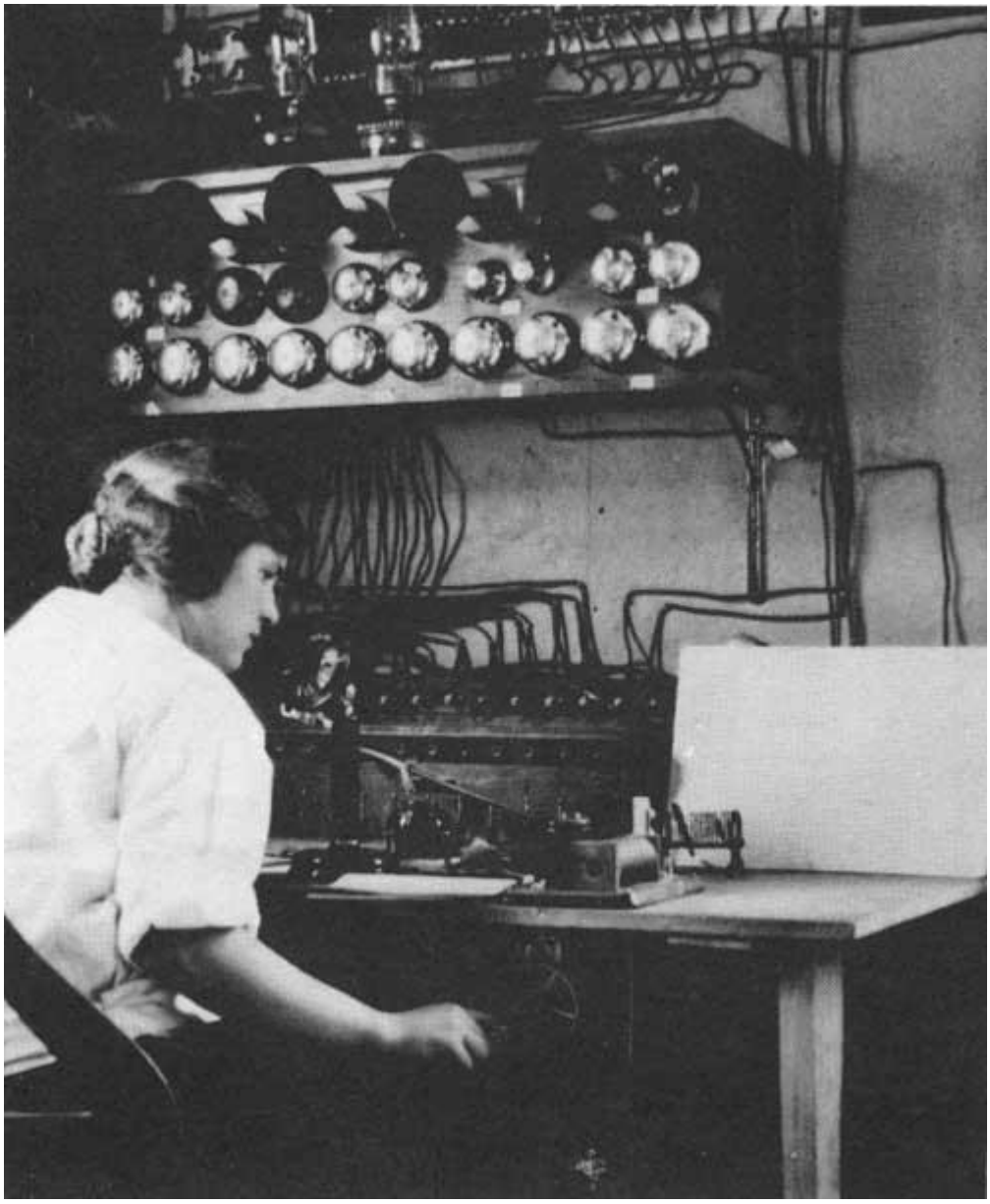
Arbor Day celebration at Oakridge. Two-millionth acre of trees planted. With Smokey Bear and Woodsey Owl, 1980.

Shelterwood Tree Harvest - Bruno Mountain Road, Detroit Rd. 1974.

Clear cuts on the southwest side of Diamond Peak, 1979.

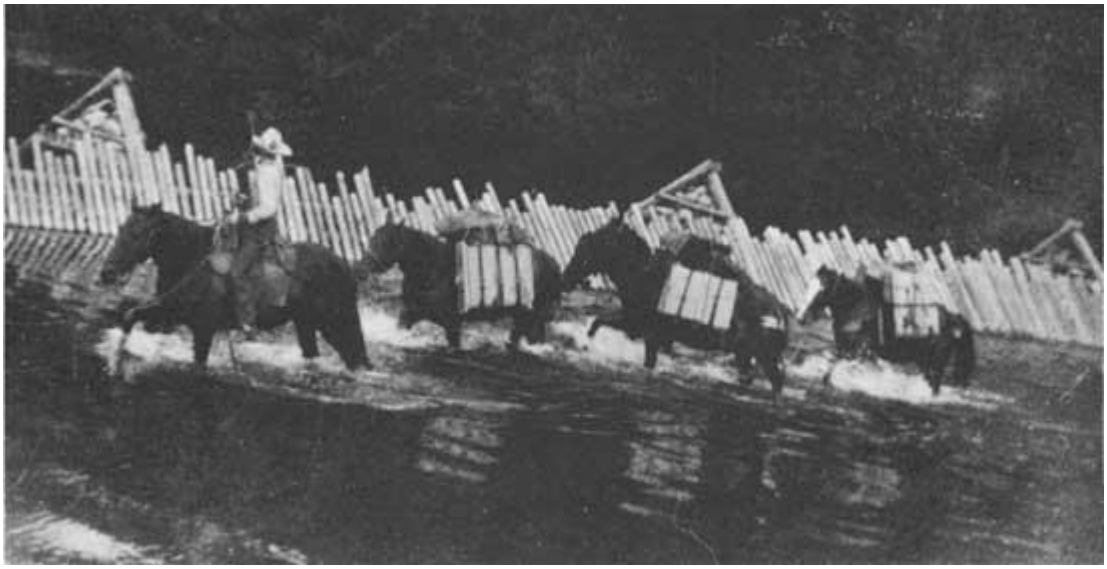
Well stocked 12-year-old trees adjacent to the Hardy Creek leave strip timber sale, 1963.

Crescent Mountain lookout telephone - Santiam National Forest, c. 1930.



Lookout telephone switchboard at Oakridge Ranger Station, 1924.

Horsepasture lookout house, 1927.



Art Hyam hauling material to build Hardesty Mountain lookout. Passing the State fish barrier on the Willamette River, 1918.

Mrs. Walter Ball in front of the Gold Hill Aircraft Warning Service observation post on Gold Butte in the Detroit Ranger District, 1943.

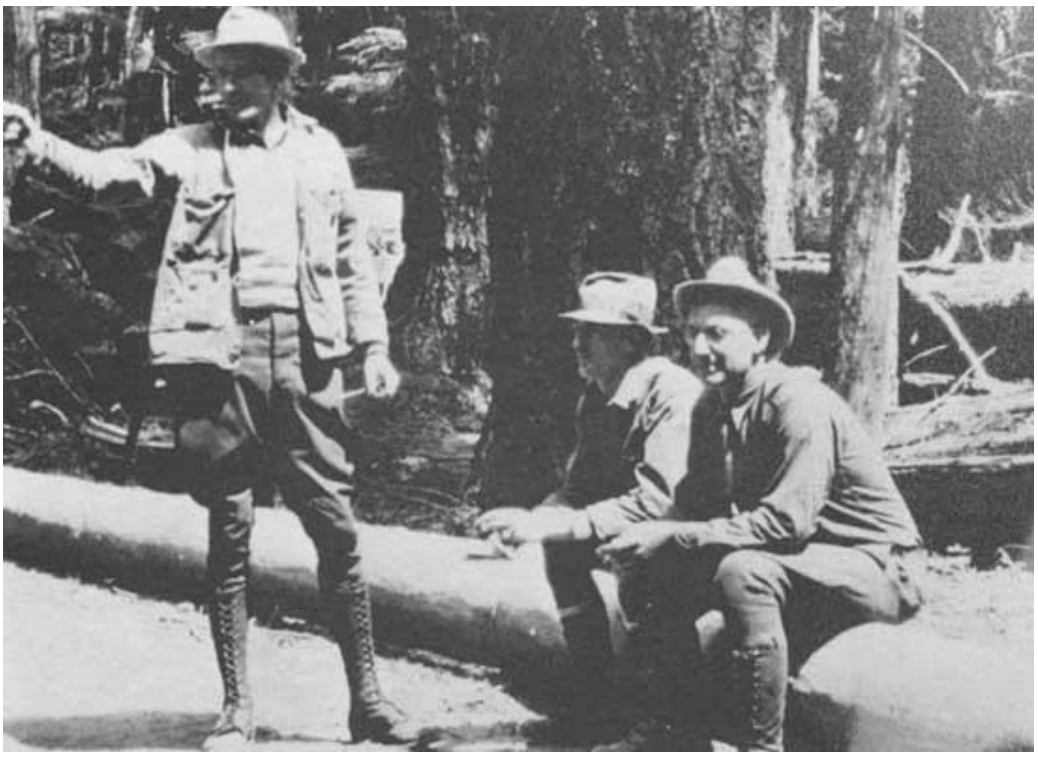
Sand Mountain Lookout, with Mt. Washington in the background, 1966.

Fire crew on the Lookout Fire, 1974.

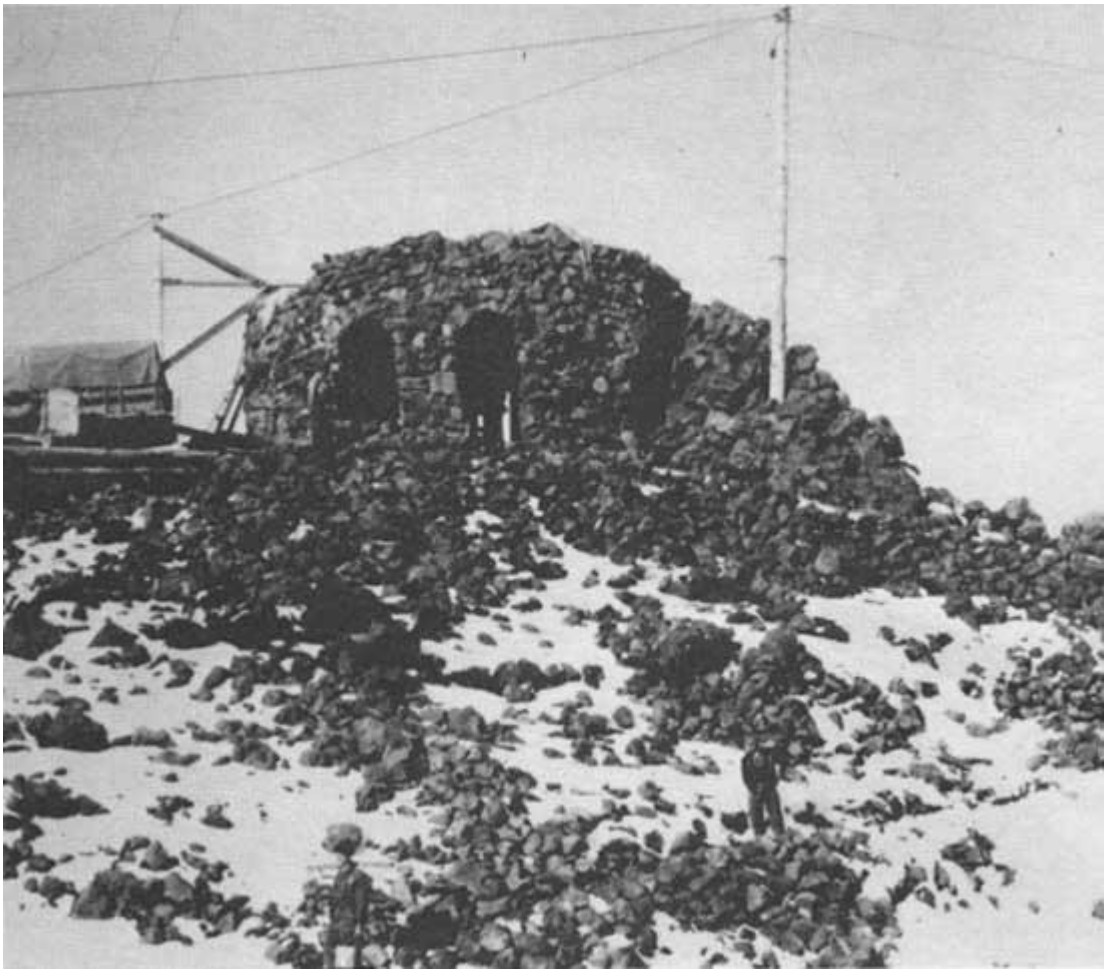
Fire fighting crew west of Oakridge, 1928.

Tumble Creek Fire, 1941.

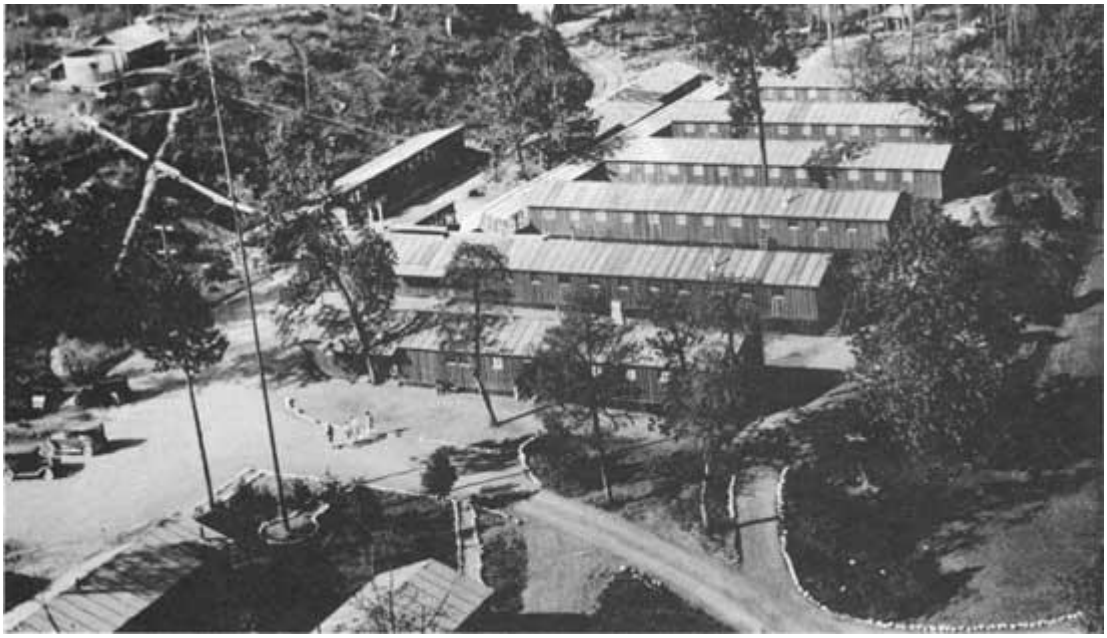
Forest patrol airplane at Eugune airfield, with Lt. DeGarme (pilot) and mechanics, 1925.



CCC superintendent Gilbert McLennan, Bill Parke, and ranger Roy Elliott discussing recreational developments at Whitewater, 1933.



Construction of the Dee Wright Memorial - McKenzie Pass, 1933.



Oakridge CCC Camp F-25, 1933.

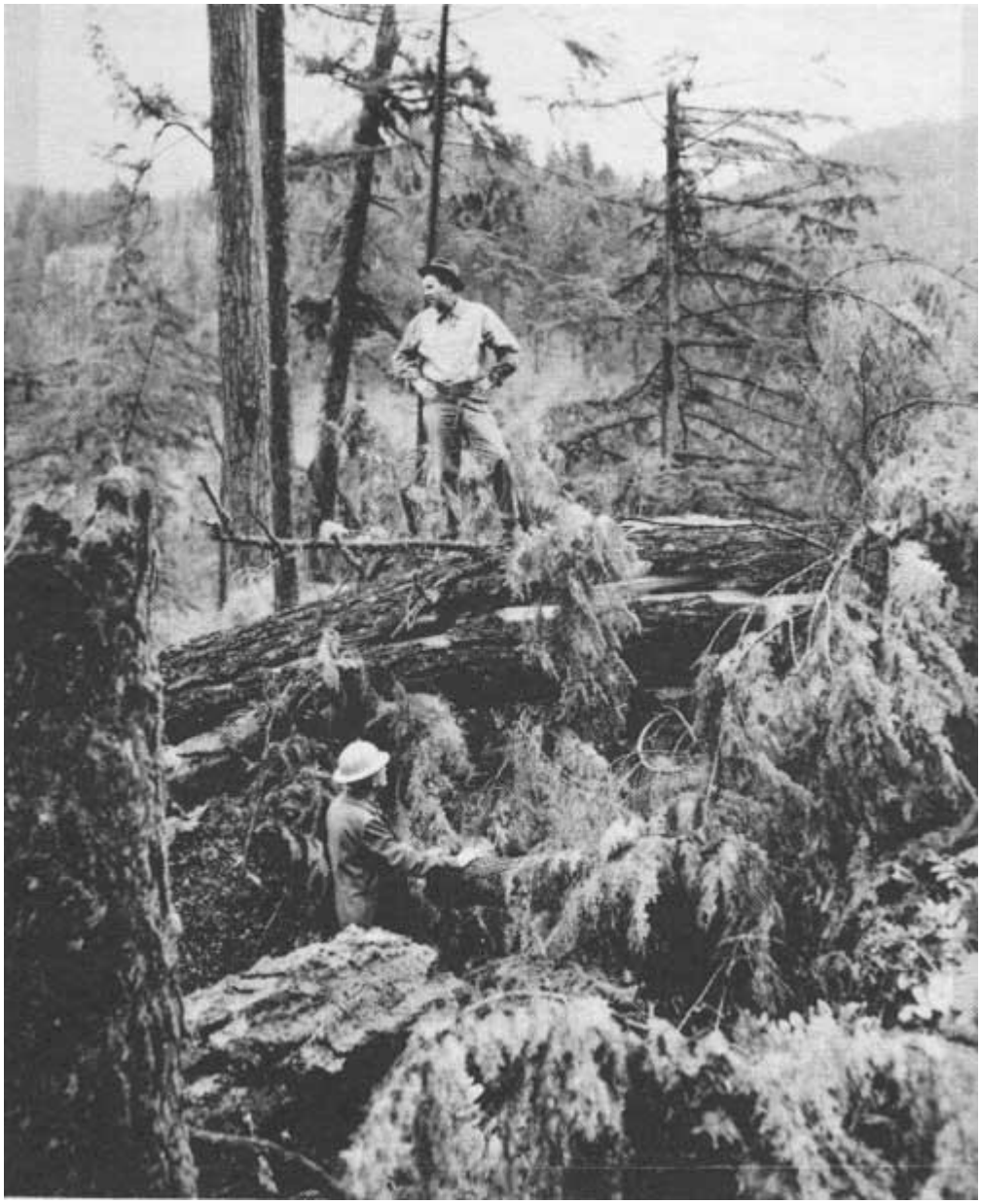
Belknap CCC Camp F-23, CCC Company 730, c. 1933.

YCC group clearing river of timber blockage, Blue River, 1979.

Helen Smith, Forest Service volunteer, and her dog Brownie, 1980.

Mrs. Rae Sullivan, civil engineering technician, designing roads in the Supervisor's Office, 1961.

Driving horses and mules along Highway 20 outside of Sisters to the Fish Lake Remount Station, 1966.



Columbus Day Storm blowdown adjacent to Highway 58, 1962.

Christmas Flood of 1964 debris collected at the head of Hills Creek Reservoir, 1965.

Save French Pete rally at the Supervisor's Office in Eugene, 1969.

The controversial French Pete drainage, 1969.

Supervisor Mike Kerrick discusses intensive management with Jim Baker of the McKenzie Guardians and Emmy Dale of the Obsidians, 1981.

Mike Morris at a NFMA public planning meeting, 1980.

Cooperative (Willamette NF and U of O) archaeological excavation at Horsepasture Cave, 1981.

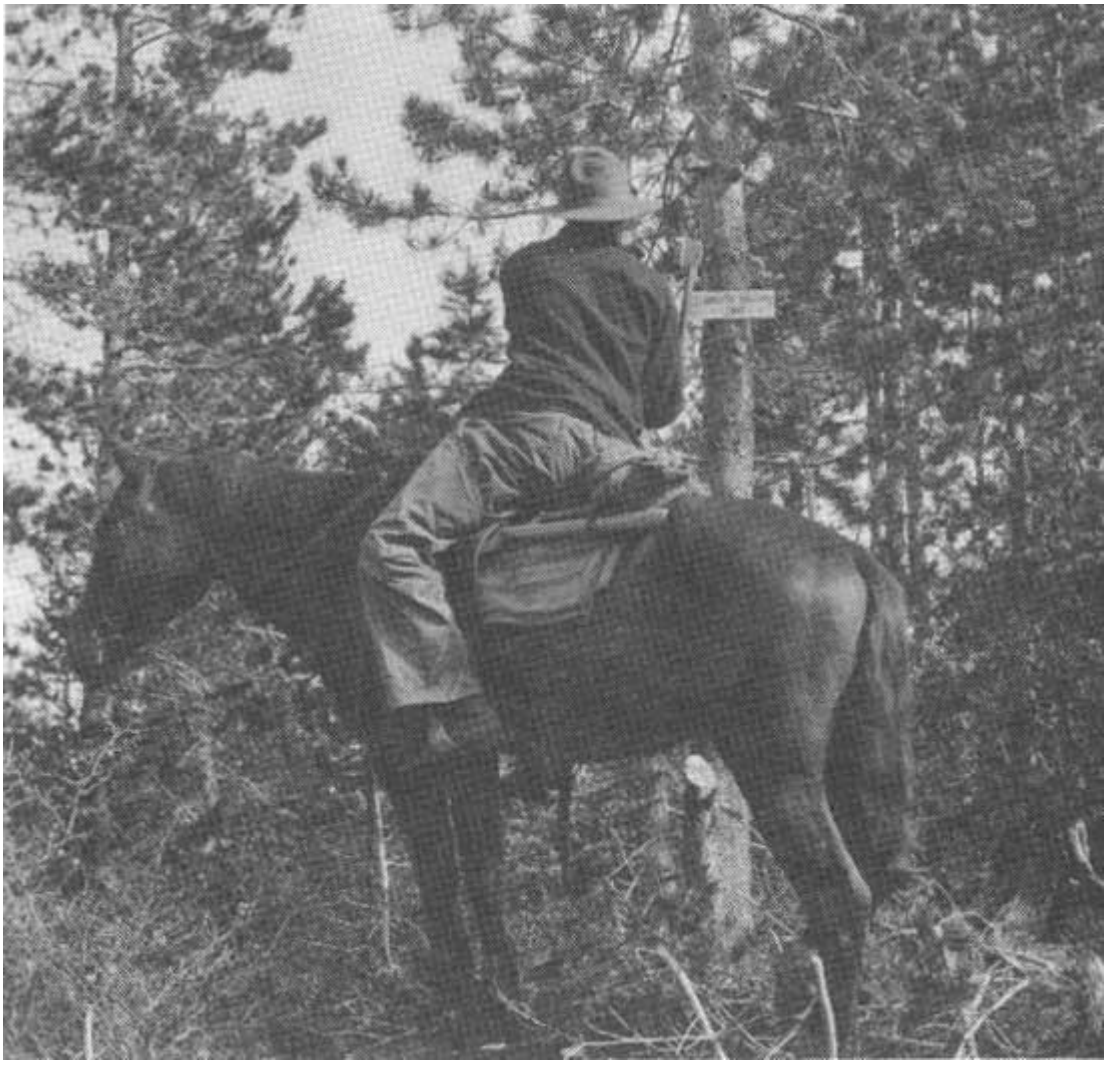
Cy Bingham carved tree at House Rock Meadow along the Skyline Trail, 1966.

Willamette Pass Ski Area, 1969.

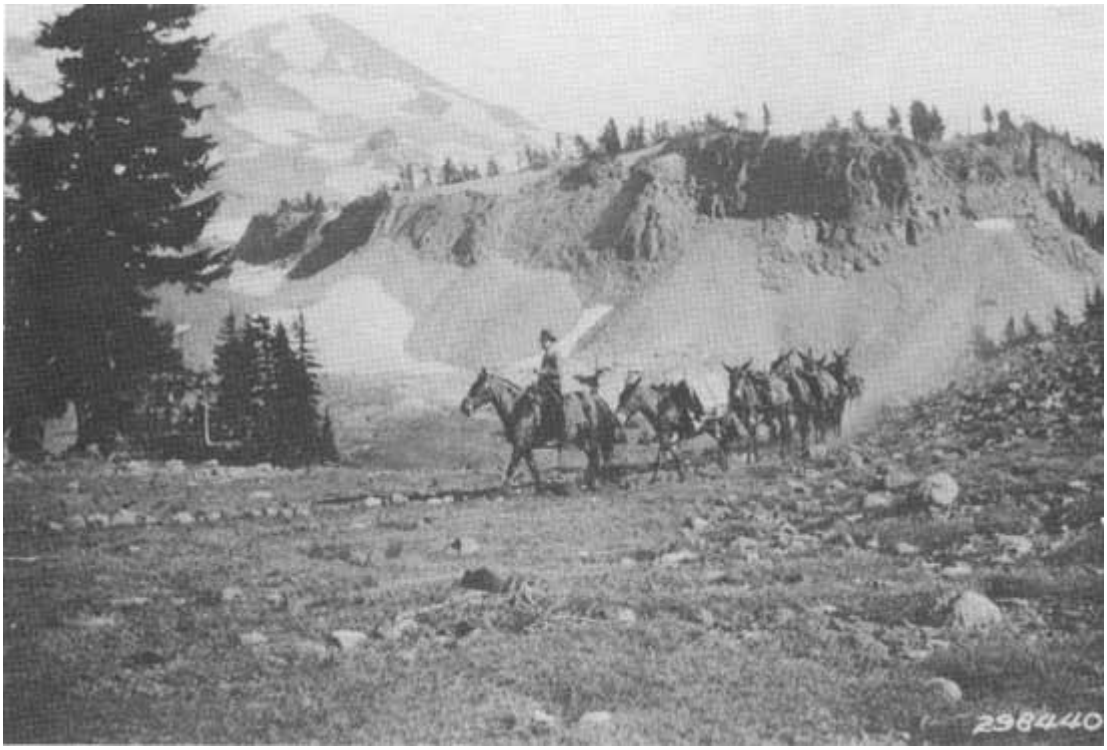
Cross-country skiing near Gold Lake, 1982.

Three Fingered Jack showing the Airstrip Burn area, 1970.

Scenic overlook from Deer Butte with Three Sisters, 1979.



Posting the Skyline Trail on the Santiam National Forest, 1920.



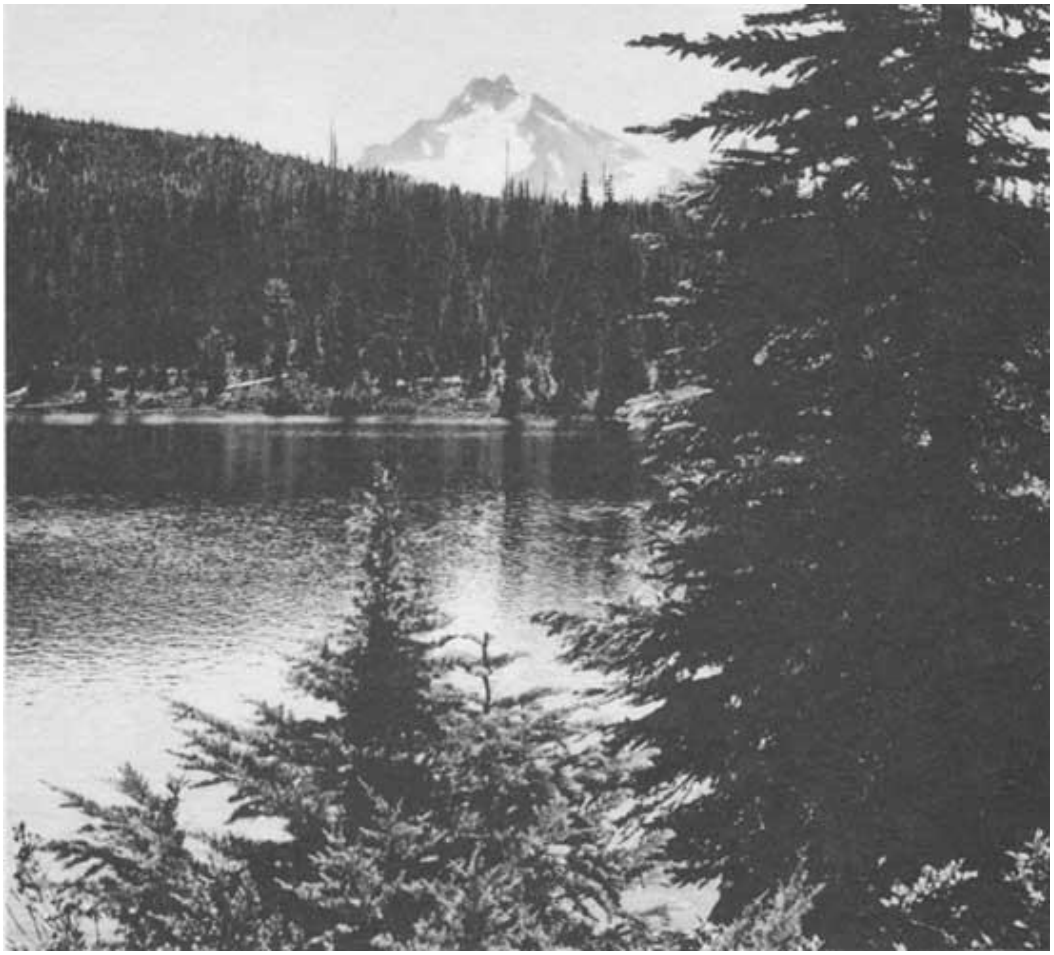
Pack train on the Skyline Trail near Scott Camp with Middle Sister in the background, 1934.

Sunshine Shelter, Three Sisters Wilderness, 1965.

Hikers from the Supervisor's Office after climbing the South Sister, 1973.

Neet & Warner's summer hotel at McCredie Springs near Salt Creek, c. 1915.

Breitenbush Hot Springs - first sweat house, 1923.



Crown Lake in the Firecamp Lakes Group, Mt. Jefferson Wilderness, 1970.

Looking over Fuji Mountain to Waldo Lake and the Three Sisters, 1971.

Ranger Alvin L. Sorseth next to a big Douglas-fir along Black Creek, c. 1964.

Family Camping at McKenzie Forest Camp, 1957.

Pilot meeting at the Lane County Fairgrounds - all 900+ employees, 1988.